



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



**B** 3 9015 00207 700 9  
University of Michigan - BUHR













# FERN S:

BRITISH AND EXOTIC.

VOLUME VIII.

CONTAINING

OSMUNDA.	CYATHEA.
HYMENOPHYLLUM.	HEMITELIA.
TRICHOMANES.	ALSOPHILA.
DAVALLIA.	TODEA.
THYRSOPTERIS.	DICTYOXIPHUM.
CIBOTIUM.	MOHRIA.
TRICHIOCARPA.	ANEMIDICTYON.
DEPARIA.	LYGODIUM.
DICKSONIA.	ANGIOPTERIS.
GLEICHENIA.	MARATTIA.

BY

E. J. LOWE, ESQ., F.R.A.S., F.G.S., F.L.S., F.Z.S., M.B.M.S.,

Hon. Mem. Dublin Nat. Hist. Soc., Mem. Geolog. Soc. Edinb.,  
Corr. Mem. Lyceum Nat. Hist. New York, Corr. Mem. Manchester Lit. and Phil. Soc., etc.

---

L O N D O N :

GEORGE BRIDGE AND SONS, 5, PATERNOSTER ROW.  
M DCCC LX.

Science Library

JK  
523  
L91  
v.8

21

# ERRATA.

## VOL. I.

- Page 21, for *charophylla*, read *chærophylla*.  
Page 31 to 49, for *Nothochæna*, read *Nothochæna*.  
Page 33, for *Cavanilles*, read *Cavanilles*.  
Page 111, for *Deaken*, read *Deakin*.  
Plate I. is *Gymnogramma Martensii*.  
Plate X. is *Gymnogramma chrysophylla*.  
Plate XIII. is *Nothochlæna Hookeri*.  
Plate XIV.—A is *Nothochlæna laevis*.  
Plate XVIII.—A is *Nothochlæna rufa*.  
Plate XVIII.—B is *Nothochlæna marantæ*.

## VOL. II.

- Page 7, for *Tordea*, read *Todea*.  
Page 9, for *Martyn*, read *Martens*.  
Page 13, for *sporadocarpum*, read *sporodocarpum*.  
Page 13, for *Schiedi*, read *Schiede*.  
Page 24, for *Mr. Stewart*, read *Mr. Stratton*.  
Page 89, *Polypodium proliferum*, add of *Roxburgh*.  
Page 67, for *Achrostichum*, read *Acrostichum*.  
Page 68, for *P. ireoides*, read *P. irioides*.  
Page 109, for *Gallioti*, read *Galleotti*.  
Plate XL. is a form of *Polypodium loriceum*, the Plate given at the end of the work *P. Karwinskianum*.

## VOL. III.

- Page 9, for *eminens*, read *eminens*.  
Page 9, for *Klotzschianum*, read *Klotzschianum*.  
Page 11, for *Leph.*, read *Leprieur*.  
Page 27, for *formosissima*, read *formosissimum*.  
Page 47, for *Klotzsch*, read *Klotzsch*.  
Page 53, for *Asplenium trapeziforme*, read *Adiantum trapeziforme*.  
Page 56, for *Phillipense*, read *Phillippense*.  
Pages 67, 69, 71, 75, 77, 81, 83, and 87, for *Platyloma rotundifolia*, *ternifolia*, *geraniifolia*, *sagittata*, *atropurpurea*, *falcata*, *hastata*, and *cordata*, read *rotundifolium*, *ternifolium*, etc.  
Page 101, for *Doryopteris sagittifolia*, read *D. sagittifolia*.  
Page 118, for *Wollaston Hall*, read *Wollaton Hall*.  
Page 187, for *Cardioclæna*, read *Cardioclæna*.  
Page 138, for *Lindsæa* read *Lindsæa*.  
Plate XXVII., for *geraniifolia*, read *geraniifolia*.

#### VOL. IV.

Page 141, for *Brazil*, read *New Zealand*.  
Page 148, for *B. Boryana*, read *B. Boryanum*.  
Page 165, for *cicutafolium*, read *cicutafolius*.  
Page 172, for *lanceofolia*, read *lanceafolia*.

#### VOL. V.

Page 5, for *Cavanelles*, read *Cavanilles*.  
Page 7, for *Plukenet*, read *Plukenet*.  
Page 11, for *Weiss*, read *Weis*.  
Page 81, for *East Indies*, read *West Indies*.  
Page 81, for *Island of Mexico*, read *Mexico and Island of Jamaica*.  
Page 23, for *Thunburg*, read *Thunberg*.  
Page 32, for *Steward*, read *Stewart*.  
Pages 49 and 50, for *brachyopterum*, read *brachyopteron*.  
Page 75, for *Scholz*, read *Schultz*.  
Page 79, for *Trachia*, read *Tarachia*.  
Pages 122 and 134, for *Downs*, read *Downes*.  
Page 164, for *fecundum*, read *fecundum*.  
Page 164, for *incisum*, read *incisum*.  
Page 166, for *feniculacea*, read *feniculacea*.  
Page 166, for *cænopteris*, read *cænopteris*.

#### VOL. VI.

Page 53, for *P. thypteris*, read *P. thelypteris*.  
Page 63, for *P. heliopteris*, read *P. hekopteris*.  
Page 79, for *fenisecii*, read *fenisecii*.  
Page 85, for *Bathium*, read *Bathmum*.  
Page 89, for *pumillum*, read *pumilum*.  
Page 97, for *Sieboldti*, read *Sieboldtii*.

#### VOL. VII.

Page 3, for *Bathium*, read *Bathmum*.  
Page 11, for *fenisecii*, read *fenisecii*.  
Pages 24 and 30, for *Gueinzius*, read *Guenzius*.  
Page 46, for *Devallioides*, read *Davallioides*.  
Page 106, for *nicotianæfolia*, read *nicotianæfolia*.

#### VOL. VIII.

Page 119, for *Dennstadtia*, read *Dennstedtia*.  
Page 147, for *Ivy-leaved*, read *Smallest-leaved*.  
Page 172, for *Wiegeltii*, read *Weigeltii*.  
Page 172, for *Mauillensis*, read *Manilensis*.  
Page 233, for *cænopteris*, read *cænopteris*.

\* \* \* The Binder is requested to cancel Plate XL. vol. ii., and substitute the one here given.

# CONTENTS OF VOL. VIII.

	Plate.	Page.
<i>Alsophila Australis</i> . . .	lxiii	177
<i>Capensis</i> . . .	lxii	175
<i>ferox</i> . . .	lxv	181
<i>pruinata</i> . . .	lxvi	183
<i>radens</i> . . .	lxiv	179
<i>Anemidictyon phyllitidis</i> . . .	lxxi	201
<i>Angiopteris evecta</i> . . .	lxxv	213
<i>Teysmanniana</i> . . .	lxxvi	215
<i>Cibotium glaucescens</i> . . .	xxxvi	103
<i>Schiedei</i> . . .	xxxv	101
<i>Cyathea canaliculata</i> . . .	lv	155
<i>dealbata</i> . . .	lviii	161
<i>excelsa</i> . . .	lvi	157
<i>medullaris</i> . . .	lvii	159
<i>Davallia aculeata</i> . . .	xxvi	79
<i>bullata</i> . . .	xxviii	83
<i>Canariensis</i> . . .	xii	51
<i>chaerophylla</i> . . .	xiii	53
<i>dissecta</i> . . .	xx	67
<i>elegans</i> . . .	xxii	71
<i>heterophylla</i> . . .	xix	65
<i>immersa</i> . . .	xv	57
<i>Khasiyana</i> . . .	xxxii	91
<i>Lindleyi</i> . . .	xvii	61
<i>lonchitidea</i> . . .	xxx	87
<i>majuscula</i> . . .	xxxiii	93
<i>Novae-Zelandiae</i> . . .	xvi	59
<i>ornata</i> . . .	xxiv	75
<i>pedata</i> . . .	xxv	77
<i>pentaphylla</i> . . .	xviii	63
<i>polyantha</i> . . .	xxiii	73
<i>polypodioides</i> . . .	xxxi	89
<i>pyxidata</i> . . .	xxi	69
<i>solida</i> . . .	xxvii	81
<i>tenuifolia</i> . . .	xiv	55
<i>trichosticha</i> . . .	xxix	85
<i>Deparia prolifera</i> . . .	xxxviii	111
<i>Dicksonia antarctica</i> . . .	xlili	125
<i>cicutaria</i> . . .	xl	119
<i>culcita</i> . . .	xxxix	117
<i>Davallioides</i> . . .	xli	121
<i>Moluccana</i> . . .	xlvi	133

	Plate.	Page.
<i>Dicksonia punctiloba</i> . . .	xlili	123
<i>rubiginosa</i> . . .	xlvi	131
<i>squarrosa</i> . . .	xliv	129
<i>Dictyoxiphium Panamense</i> . . .	lxix	193
<i>Gleichenia dicarpa</i> . . .	xlvi	139
<i>dichotoma</i> . . .	li	145
<i>fiabellata</i> . . .	l	143
<i>heciostophylla</i> . . .	lii	147
<i>microphylla</i> . . .	xlvi	137
<i>rupestris</i> . . .	liii	149
<i>semivestita</i> . . .	liv	151
<i>spelunca</i> . . .	xliv	141
<i>Hemitelia grandifolia</i> . . .	lix	165
<i>horrida</i> . . .	lx	167
<i>Hostmanni</i> . . .	lxi	169
<i>Hymenophyllum cruentum</i> . . .	v A	15
<i>demissum</i> . . .	vii B	22
<i>hirtellum</i> . . .	vii A	21
<i>polyanthos</i> . . .	viii A	23
<i>sericeum</i> . . .	viii B	25
<i>Tunbridgense</i> . . .	v B	17
<i>unilaterale</i> . . .	vi	19
<i>Lygodium flexuosum</i> . . .	lxxiii	207
<i>Japonicum</i> . . .	lxxii	205
<i>palmatum</i> . . .	lxxiv	209
<i>Marattia laxa</i> . . .	lxxvii	219
<i>Mohria thurifraga</i> . . .	lxx	197
<i>Osmunda cinnamomea</i> . . .	i	3
<i>Claytoniana</i> . . .	ii	5
<i>gracilis</i> . . .	iv	9
<i>regalis</i> . . .	iii	7
<i>Thlyropteris elegans</i> . . .	xxxiv	97
<i>Todea Africana</i> . . .	lxvii	187
<i>hymenophylloides</i> . . .	lxviii	189
<i>Trichiocarpa Moorii</i> . . .	xxxvii	107
<i>Trichomanes Bancroftii</i> . . .	ix c	34
<i>crispum</i> . . .	x A	35
<i>muscooides</i> . . .	x B	37
<i>radicans</i> . . .	xi	41
<i>reniforme</i> . . .	ix A	31
<i>sinuosum</i> . . .	x C	39
<i>venosum</i> . . .	ix B	33





# F E R N S ;

## BRITISH AND EXOTIC.

---

### OSMUNDEÆ.

COMPOSED of *Osmunda* and *Todea*, the latter genus of which will be reserved for the Appendix at the close of this volume.  
Two small families of interesting and handsome Ferns.

---

### GENUS I.

#### OSMUNDA. LINNÆUS.

FRONDS pinnate or bipinnate, with forked free veins. Fertile portion contracted, and forming simple or compound sporangiferous panicles. In some species the barren and fertile fronds are different, one set of fronds being sterile and the other fertile; in other species, where fertile and sterile on the same frond, the upper in some cases, and the middle in others only is fertile.

Length of fronds from two to twelve feet.

A genus of plants delighting to grow in damp situations, usually on the banks of a river or brook.

VOL. VIII.

B

One species only, *Osmunda Regalis*, is an inhabitant of England.

Mr. Smith, in his "Catalogue of the Ferns Cultivated at Kew," enumerates—

Cinnamomea, <i>Linnaeus</i> .	Regalis, <i>Linnaeus</i> .
Claytoniana, <i>Linnaeus</i> .	Spectabilis, <i>Willdenow</i> .

Mr. Moore, in his "Index Filicum," mentions—

Regalis, <i>Linnaeus</i> .	Claytoniana, <i>Linnaeus</i> .
Gracilis, <i>Link</i> .	Cinnamomea, <i>Linnaeus</i> .
Javanica, <i>Blume</i> .	Imbricata, <i>Kunze</i> .

Link, in his "Filicum Species," gives—

Regalis, <i>Linnaeus</i> , England.	Glaucescens, <i>Link</i> , North America.
Spectabilis, <i>Willdenow</i> , Canada.	
Palustris, <i>Link</i> , Brazil.	Interrupta, <i>Michaux</i> , Canada.
Gracilis, <i>Link</i> , North America.	Cinnamomea, <i>Linnaeus</i> , Florida.

Kunze, in his "Index Filicum," enumerates—

Cinnamomea.	Gracilis.
Claytoniana.	Regalis.
Glaucescens.	Spectabilis.

Sprengel, in his "Systema Vegetabilium," gives—

Claytoniana, <i>Linnaeus</i> .	Obtusifolia, <i>Willdenow</i> .
Interrupta, <i>Michaux</i> .	Cinnamomea, <i>Linnaeus</i> .
Regalis, <i>Linnaeus</i> .	Japonica, <i>Thunberg</i> .
Spectabilis, <i>Willdenow</i> .	Lancea, <i>Thunberg</i> .











Plant from a photograph.

## OSMUNDA CINNAMOMEA.

LINNÆUS. SCHKUHR. J. SMITH. SPRENGEL.  
KUNZE. LINK. LIEBMANN. PRESL.

PLATE I. VOL. VIII.

*Osmunda*—Derivation dubious, probably from the Saxon *Osmund*.  
*Cinnamomea*—Cinnamon.

AN extremely handsome and very dissimilar species, worthy of a place in every collection.



A deciduous hardy Fern.

Native of North America, Mexico, East Indies, and South America.

Introduced into the Royal Gardens, Kew, in 1772, having been received from Mr. Martin.

Fertile and sterile fronds different, the barren fronds growing round an erect caudex, and being inclined at an angle of 45°, whilst the fertile fronds rise perpendicularly in the centre.

Sterile fronds bipinnatifid, the pinnæ being oblong-obtuse. The fertile fronds bipinnate, and densely covered with a ferruginous mass of hairs, as is also the stem of the sterile frond. Pinnæ usually alternate. Frond narrow, being only seven inches and a half in the widest part, and narrowing to the apex. Width of pinnæ three-quarters of an inch; usually about twenty-five pairs of pinnæ.

Fertile frond erect, and twenty-six inches in length, of which twenty-three inches is naked. Sterile frond about thirty-three inches in length, the basal nine inches being naked. Membranaceous; colour a bluish green.

Stipes and rachis green.

Fertile portion, when mature, a rich reddish brown, which, in contrast with the stem covered with whitish wool, gives the plant a singular appearance.

Veins forked.

In order to show the habit of the plant a wood-cut illustration from a photograph is appended.

For plants my thanks are due to the late Mr. Large, of New York, and to Mr. Sim, of Foot's Cray; and for fronds to Mr. G. Norman, of Hull.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.



Portion of sterile Pinna.





70

CEMUDA CLAYTONIANA.  
H. COL. S.







Plant from a photograph.

## OSMUNDA CLAYTONIANA.

LINNÆUS. J. SMITH. SPRENGEL. KUNZE.

PLATE II. VOL. VIII.

*Osmunda interrupta*,  
" "

MICHAUX. SCHKUHR.  
LINK. WILLDENOW.

*Osmunda*—Derivation dubious, probably from the Saxon *Osmund*.  
*Claytoniana*—Clayton's.

A most lovely vivid green Fern, very dissimilar from all others, and worthy to be grown in every hardy fernery, and

making a handsome specimen under pot culture; requiring to be grown in a shady damp situation.

A deciduous hardy species. Native of North America.

Introduced into the Royal Gardens, Kew, in the year 1772, by Mr. Martin.

The fronds, which are bipinnatifid, grow somewhat erect out of an erect caudex, the middle portion of the frond being contracted and fertile, having sterile pinnæ above, and this portion bending horizontally.

The appropriateness of Michaux's name of *interrupta* cannot be doubted, yet Linnæus's name of *O. Claytoniana* has priority in its favour.

In fronds thirty-two to thirty-three inches in length the basal ten inches is naked, above which are three pairs of pinnæ, which are sub-opposite, three inches and a half in length, distant, and occupying five inches above the stipes; then come the fertile pinnæ, about five pairs, occupying nine more inches of the frond, above which there are sterile pinnæ, about eight or nine pairs, close together, touching each other, and occupying the remaining nine inches of the frond, and this upper portion being somewhat triangular in form.

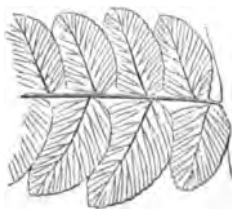
Stipes very hirsute, with long woolly pale red hairs. When the frond is entirely sterile it is not erect, but inclined at an angle of about 40°, bearing fifteen or sixteen pairs of pinnæ. Colour vivid green. Veins forked.

The wood-cut illustration is from a photograph, and is intended to show the habit of this exceedingly handsome Fern.

For plants I am indebted to the late Mr. Large, of New York, and to Mr. Sim, of Foot's Cray.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.



Portion of sterile Pinna.

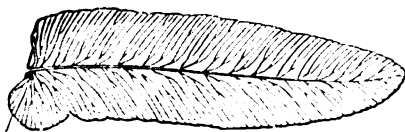












Pinnule of mature Frond—upper side.

## OSMUNDA REGALIS.

LINNÆUS. PLUMIER. SCHKUHR. LINDLEY AND MOORE.  
 J. SMITH. BOLTON. J. E. SMITH. BABINGTON.  
 HOOKER AND ARNOTT. NEWMAN. DEAKIN. SOWERBY.  
 PRATT. RALFS. MACREIGHT. SPRENGEL. KUNZE. LINK.  
 WILLDENOW. OEDER. EHRHART.

PLATE III. VOL. VIII.

*Aphyllocalpa regalis*,  
*Struthiopteris regalis*,  
*Osmunda filix-florida*,  
*Filix latifolia*,  
 " *palustris*,  
 " *aquatica*,  
 " *florescens*,

CAVANILLES.  
 BEERNHARDI.  
 LOB.  
 CORDUS.  
 DODONÆUS.  
 DALECHAMPS.  
 DALECHAMPS.

*Osmunda*—Derivation dubious, probably from the Saxon, *Osmund*.

*Regalis*—Royal.

THE Royal Fern, Osmund Royal, or Flowering Fern, is one of our handsomest British species.

A hardy indigenous plant, growing in wet or boggy situations.

A local, but wide-spread species, extending from the West of England through Scotland to the Shetland and Western Islands. A common Irish Fern; native also of Jersey.

Found throughout Europe; in Asia—in the Himalaya and Mingrelia; in Africa—in Algiers, Azores, and the Cape of Good Hope; and in North and South America.

Wherever this Fern grows in abundance the effect is such as to make it “king” of the locality. Ten years ago this Fern grew in a field belonging to Mr. C. Allcock, at Bulwell; draining the land, however, has completely destroyed this Nottinghamshire locality of *Osmunda Regalis*.

Easily cultivated, preferring shade, and a wet peaty soil.

Fronds coriaceous or herbaceous, pinnate or bipinnate, and occasionally tripinnate; the pinnæ or segments frequently articulated. Fertile segments contracted and mostly rachiform; pinnules oblong and dilated; base auricled.

Rhizoma caudiciform or tufted.

Caudex perennial, stout, and sometimes two feet in height.

Stipes half the length of the whole frond, succulent, and, as with the rachis, tinged with red. Scaly when young, pale green and smooth when fully grown.

Pinnules opposite or alternate, about two inches in length.

Veins branched.

Fructification mostly occupying the whole of the upper portion of the frond, yet occasionally only a portion, one half of the pinnule being fertile and contracted, and the other half sterile.

Length of frond from two to twelve feet, according to situation.

For plants my thanks are due to Miss Millett, of Penzance; Mr. Wilkinson, of Totteridge Park; and Mr. Joseph Sidebotham, of Manchester.

It can be procured at any Nursery.

The illustration is from a plant in my own collection.



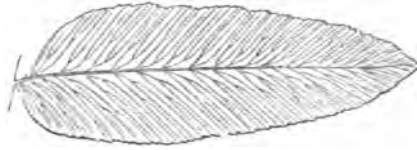


COMMON FERN.  
FERN.









Pinnule of mature Frond—upper side.

## OSMUNDA GRACILIS.

LINK. KUNZE. SCHOTT.

PLATE IV. VOL. VIII.

*Osmunda humilis*,  
" *palustris*,

SWEET?  
LINK. SWEET.

*Osmunda*—Derivation dubious, probably from the Saxon, *Osmund*.  
*Gracilis*—Slender.

A CHARMING delicate-looking flowering Fern, somewhat resembling a very delicate *Osmunda Regalis*.

A deciduous hardy species.

Native of North America.

Fronds bipinnate, the pinnæ opposite or sub-opposite, and distant; pinnules large in size, about six pairs on each pinna, with an ultimate larger one, and this ultimate pinnule frequently connected with one or both of the pinnules immediately below it. The pinnules are short-stalked, and much larger than in *O. Regalis*.

Veins forked, and less distinct than in *O. Regalis*.

Stipes roundish, not hirsute, and green.

Length of frond about twenty-six inches, of which the basal twelve to fifteen inches is naked. Length of pinnæ eight

VOL. VIII.

C

inches; length of pinnules three inches, width three-quarters of an inch.

The frond is fertile at the apex for the upper six inches.

In *O. Regalis* the base of the pinnules is not rounded, and the footstalk is not so apparent. The plant is much larger, and has many more pinnæ, usually four times as many, and these are placed close together, but the pinnules are smaller. The rachis, stipes, and fertile portion, are very much more slender in *O. gracilis*, and its forked veins less prominent.

Fronds ascending.

For plants of this species my thanks are due to the late Mr. Large, of New York, and to Mr. Sim, of Foot's Cray.

It may be procured of Messrs. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; Kennedy, of Covent Garden; Booth, of Hamburg; and Cooling, of Derby.

The illustration is from a plant in my own collection.

## DICKSONIÆ.

IN this tribe of Ferns Sir W. Hooker enumerates—

Dicksonia,	51 species.	Trichomanes,	87 species.
Cibotium,	6 “	Davallia,	112 “
Deparia,	2 “	Lindsæa,	60 “
Loxsoma,	1 “	Dictyoxylum,	1 “
Hymenophyllum,	85 “		

Mr. Smith, in his “Catalogue of the Ferns grown at Kew,” enumerates—

Lindsæa,	2 species.	Deparia,	1 species.
Schizoloma,	1 “	Trichomanes,	3 “
Dictyoxylum,	1 “	Hymenophyllum,	3 “
Humata,	2 “	Sitolobium,	5 “
Davallia,	10 “	Balantium,	1 “
Leucostegia,	2 “	Dicksonia,	4 “
Odontosoria,	2 “	Cibotium,	2 “
Microlepia,	4 “	Thyrsopteris,	1 “

The several families of the tribe *Dicksoniæ* have the sporangiferous receptacles terminal, marginal, or punctiform, or when several are combined, linear-elongated. The indusium is lateral, and attached interiorly, the exterior margin being free, and usually conniving with the opposite portion of the margin, (which is changed in texture,) forming a bivalved or tubular groove, in which the sporangia are situated.

Amongst these Ferns are some of the most pigmy on the one hand, and some of the most gigantic on the other.

Sir W. J. Hooker describes above four hundred species, and of these only three are inhabitants of Great Britain and Ireland.



## GENUS I.

## HYMENOPHYLLUM. SMITH.

A GROUP of dwarf Ferns, for the most part more resembling mosses than Ferns, two of which, *H. Tunbridgense* and *H. unilaterale*, are natives of Great Britain. They are all difficult to cultivate, which renders the foreign species rare in a living state in this country.

The fronds are pellucid, membranaceous, simple, or decomposed, with a creeping and mostly filiform rhizoma.

Sori situated within a two-valved involucre.

Veins dichotomously branched, being simple and costæform in the segments.

The name is derived from the Greek, *hymen*—a membrane, and *phyllon*—a leaf.

Known in England as the "Film Fern," or "Filmy Fern."

Sir W. J. Hooker gives eighty-five species in his "Species Filicum," namely,—

Cruentum, *Cavanilles*, Chiloe.

Marginatum, *Hooker*, New Holland.

Asplenioides, *Swartz*, Jamaica.

Abruptum, *Hooker*, Jamaica.

Hirsutum, *Swartz*, Jamaica.

Ciliatum, *Swartz*, West Indies.

Plumieri, *Hooker*, Hispaniola.

Trichophyllum, *Hooker*, Cumana

Boryanum, *Willdenow*, Mauritius

Hirtellum, *Swartz*, Jamaica.

Chiloense, *Hooker*, Chiloe.

Organense, *Hooker*, Brazil.

Valvatum, *Hooker*, Columbia.

Beyrichianum, *Kunze*, Peru.

Microcarpum? *Desvaux*, Hispaniola.

Capillare? *Desvaux*.

Elegans, *Sprengel*, Brazil.

Pulchellum, *Schlechtendal*, Mexico.

Sericeum, *Swartz*, Jamaica.

Interruptum, *Kunze*, Pampayaco

Pyramidatum, *Desvaux*, Tropical America.

Elasticum, *Bory*, Mauritius.

Berteroi, *Hooker*, Juan Fernandes.

Obtusum, *Hooker*, Oahu.

Æruginosum, *Carmichael*, New Zealand.

Lanceolatum, *Hooker*, Oahu.

Lindenii, *Hooker*, Caraccas.

Arbuscula? *Desvaux*, Mauritius.

- Tunbridgense, *Smith*, England.  
 Wilsoni, *Hooker*, England.  
 Peruvianum, *Hooker*, Esmeraldas.  
 Pectinatum, *Cavanilles*, Chiloe.  
 Jamesoni, *Hooker*, Columbia.  
 Smithii, *Hooker*, Philippine Islands.  
 Bridgesii, *Hooker*, Chiloe.  
 Dentatum? *Cavanilles*, Chiloe.  
 Multifidum, *Swartz*, N. Zealand.  
 Bivalve, *Swartz*, New Zealand.  
 Dichotomum, *Cavanilles*, Java.  
 Tortuosum, *Banks*, Staten Land.  
 Attenuatum, *Hooker*, Chiloe.  
 Neesii, *Hooker*, Java.  
 Secundum, *Hooker*, Staten Land.  
 Cristatum, *Hooker*, Andes.  
 Spinulosum, *Hooker*, Caraccas.  
 Fucoides, *Swartz*, Jamaica.  
 Denticulatum, *Swartz*, Java.  
 Rarum, *Brown*, Tasmania.  
 Badium, *Hooker*, East Indies.  
 Caudiculatum, *Martius*, Chiloe.  
 Fimbriatum, *Smith*, Luzon.  
 Fuciforme, *Swartz*, Chiloe.  
 Pulcherrimum, *Colenzo*, New Zealand.  
 Dilatatum, *Swartz*, N. Zealand.  
 Protrusum, *Hooker*, Jamaica.  
 Recurvum, *Gaudichaud*, Sandwich Islands.  
 Crispatum, *Wallich*, Nepal.  
 Flexuosum, *Cunningham*, New Zealand.  
 Undulatum, *Swartz*, Jamaica.  
 Javanicum, *Sprengel*, India.  
 Myriocarpum, *Hooker*, Columbia.  
 Polyanthos, *Swartz*, Peru.  
 Crispum, *Hooker*, Venezuela.  
 Erosum, *Blume*, Java.  
 Dædaleum, *Blume*, Java.  
 Imbricatum, *Blume*, Java.  
 Ricciæfolium, *Bory*, Bourbon.  
 Australe? *Willdenow*, Tasmania.  
 Exsertum, *Wallich*, Nepal.  
 Capillaceum, *Roxburgh*, St. Helena.  
 Demissum, *Swartz*, New Zealand.  
 Scabrum, *Richard*, New Zealand.  
 Reniforme, *Hooker*, Peru.  
 Gracile, *Bory*, Mauritius.  
 Axillare, *Swartz*, Jamaica.  
 Flabellatum, *Labillardiere*, Tasmania.  
 Floribundum? *Hooker*, Cumana.  
 Ramosissimum? *Hamilton*, Nepal.  
 Tenellum? *Don*, Nepal.  
 Endiviæfolium? *Desvauz*, Peru.  
 Decurrens? *Swartz*.  
 Emarginatum? *Swartz*, Java.  
 Hygrometricum? *Desvauz*, Madagascar.  
 Nudum? *Desvauz*, Guadeloupe.  
 Telfairianum? *Wallich*, Mauritius.

Not more than four or five of these species are cultivated in this country, and with the exception of the British ones, these are very rare.



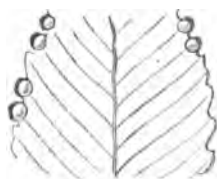




100







Portion of mature Frond—upper side.

## HYMENOPHYLLUM CRUENTUM.

CAVANILLES. HOOKER. SWARTZ. WILLDENOW.

PLATE V.—A. VOL. VIII.

*Hymenophyllum*—Membrane-leaved.

*Cruentum*—Blood-coloured.

A HANDSOME rare species, and somewhat doubtful whether alive in our British collections at the present time.

An evergreen stove Fern.

Native of Chiloe, growing on the trunks of trees.

Fronds simple, broadly lanceolate, sinuato-dentate, and pinninerved. Veins simple.

Stipes very long and slender.

Rhizoma slender and creeping.

Sori marginal, the wedge-shaped base sunk in the frond, the other portion protruding beyond the frond.

Length of frond six inches; colour blood-red when growing, but turning to brown in the dried specimens.

For fronds I am indebted to Mr. R. J. Gray, of St. Thomas', Exeter.

It cannot be procured from any Nurserymen.

The illustration is from Mr. Gray's frond.





Portion of Pinna, (magnified.)

## HYMENOPHYLLUM TUNBRIDGENSE.

J. E. SMITH. HOOKER AND ARNOTT.

BABINGTON. DEAKIN. NEWMAN. SOWERBY. WILLDENOW.

MOORE. SCHKUHR. BROWN. J. SMITH. SWARTZ.

PLATE V.—B. VOL. VIII.

*Hymenophyllum asperulum*,

“ *revolutum*,

“ *Thunbergii*,

“ *minimum*,

“ *cupressiforme*,

*Trichomanes Tunbridgense*,

“ *pulchellum*,

KUNZE.

COLENSO.

ECKLON.

RICHARD. A. CUNNINGHAM.

LABILLARDIERE. WILLDENOW.

LINNÆUS. HEDWIG.

SALISBURY.

*Hymenophyllum*—Membrane-leaved.

*Tunbridgense*—Tunbridge.

THE Tunbridge Film Fern is a dwarf mossy-looking Fern, requiring to be grown under a glass in a shady situation.

A hardy indigenous species.

A local Fern, yet found in many parts of England, Wales, Scotland, and Ireland. I have received specimens from Kil-

larney, Penzance, Tunbridge Wells, Exeter, and from several places in Westmorland.

Found throughout Europe, India, Mauritius, South Africa, Chili, Brazil, Azores, Madeira, and New Zealand.

The fronds are pellucid, smooth, membranaceous, olive green in colour, elongated-ovate, pinnate below; the pinnæ subvertical, alternate, decurrent, winged, and furcately pinnatifid; segments linear-obtuse, and spinulosely serrate.

Veins dichotomously branched; venules free.

Rhizoma rigid, creeping, filiform, and dark brown in colour, and branched.

Stipes slender. Rachis winged.

Sori extra marginal, the two valved involucre projecting outwards from the margin, the valves being somewhat orbicular, flattish, and spinulosely serrate on the upper margin.

Length from one to six inches.

Inhabiting mountainous and rocky places, covering the damp rocks and trunks of trees.

My thanks are due to Miss Millett, of Penzance; Mrs. Delves, of Tunbridge Wells; Mr. R. J. Gray, of St. Thomas', Exeter; and Mr. Clarke, of Flass House, Crosby Ravensworth, for plants of this Fern.

It may be procured of any Nurseryman.

The illustrations are from plants in my own collection.













Portion of Pinna, (magnified.)

## HYMENOPHYLLUM UNILATERALE.

WILLDENOW. BORY. NEWMAN. SOWERBY. MOORE.

PLATE VI.—A AND B. VOL. VIII.

<i>Hymenophyllum Wilsoni</i> ,	HOOKE AND ARNOTT.
“ “	SPRENGEL. WILSON.
“ “	BABINGTON. DEAKIN.
“ <i>Tunbridgense</i> ,	SCHKUHE. KUNZE.
“ <i>peltatum</i> ,	DESVAUX.
“ <i>Menziesii</i> ,	PRESL.
“ <i>Meyeri</i> ,	PRESL.
<i>Trichomanes peltatum</i> ,	POIRET.
“ <i>Tunbridgense</i> ,	BOLTON.

*Hymenophyllum*—Membrane-leaved.

*Unilaterale*—One-side.

WILSON'S FILM FERN is a somewhat similar-looking Fern to Plate V.—B, darker in colour, and readily told from *H. Tunbridgense* by the form of the valves; in *H. unilaterale* they are ovate and convex, and the margin is even; whilst in *H. Tunbridgense* the edge is spinulosely serrate, and the valves are rounder and flatter.

More widely spread throughout England, Scotland, Ireland, and Wales, than *H. Tunbridgense*.

Native also of Norway, the Faroe Isles, Bourbon, South Africa, Terra del Fuego, Cape Horn, Falkland Isles, Tasmania, and New Zealand.

Fronds smooth, pellucid, membranaceous, dark green in colour, elongate-oblong, and pinnate. Pinnæ decurrent in the upper part, distinct below, curved backwards, and digitately pinnatifid. Segments linear obtuse, and spinulosely serrate.

Veins dichotomously branched.

Sori extra marginal. Involucres turned in an opposite direction to that of the segments.

Valves ovate-oblong and convex, the edge entire.

Rhizoma rigid, creeping, branched, filiform, and dark brown.

Stipes slender and wiry; rachis narrowly winged above.

Length of frond from two to six inches.

Mr. Clowes remarks that the fronds resume their growth for several years, and that this is not the case with *H. Tunbridgense*.

Mr. Gray, of St. Thomas', Exeter, has forwarded to me plants of a branched variety, which is here figured as variety *Ramosum*, (see Plate VI.—B.) It is very handsome, the divisions being narrower, and the plant altogether more slender. This species has a tendency to become branched.

My thanks are due to Mr. R. J. Gray, St. Thomas', Exeter; Miss Millett, of Penzance; Mrs. Delves, of Tunbridge Wells; and Mr. Clarke, gardener to W. Dent, Esq., Crosby Ravensworth, for plants of this species.

It may be procured of any Nurseryman.

The illustrations are from plants forwarded by Mr. Gray.





SYMPLOCARPA F. ...  
 VII. 1868.

H. DENNIS









Portion of mature Frond—upper side.

## HYMENOPHYLLUM HIRTELLUM.

SWARTZ. HOOKER. WILLDENOW.

PLATE VII.—A. VOL. VIII.

*Hymenophyllum*—Membrane-leaved.

*Hirtellum*—Hairy.

A BEAUTIFUL *Trichomanes*-looking plant, rare in cultivation. An evergreen stove species.

Native of Jamaica.

Fronds ovate-oblong in shape, slightly acuminate, thin, pellucid, membranous, arching, and from two to three inches wide.

Tripinnatifid, with linear, slightly attenuated, closely-placed segments.

Hairy, and more especially on the costa and margin; hairs branched and fulvous. Stipes slightly winged, wiry, and hairy.

Involucres ovate-orbicular in form, somewhat obliquely cuneate at the base, and partially sunk in the frond, and broader than the segments, the valves ciliated. Fronds elastic.

Growing on wet banks.

Length of frond from four to six inches; colour brownish green.

For fronds my thanks are due to Mr. R. Sim, Foot's Cray.

It may be procured from Mr. R. Sim, of Foot's Cray.

The illustration is from a frond kindly sent by Mr. Sim.

VOL. VIII.

E



Portion of barren Frond—upper side.

## HYMENOPHYLLUM DEMISSUM.

SWARTZ. HOOKER. SCHUHR. WILLDENOW.

PLATE VII.—B. VOL. VIII.

*Trichomanes demissum*,

FORSTER. HEDWIG.

*Hymenophyllum*—Membrane-leaved.

*Demissum*—Humble.

A PRETTY dwarf species, of a filmy texture, and having shining deep green fronds.

A warm greenhouse Fern.

Native of the Pacific Islands, New Zealand, Tasmania, and Philippine Islands.

Fronds erect, elastic, ovate-acuminate in form, and drooping. Pinnate, the pinnæ being acuminate and bi-tripinnatifid; segments linear obtuse, entire, and pointing upwards.

Stipes terete and smooth.

Rachis not winged except above.

Involucres situated on the lateral segments, small, ovate, and sessile.

Caudex and stipes stout.

Length of frond from eight to ten inches, and stipes nearly as long; width from three to four inches.

For a frond of this rare Fern I am indebted to Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. R. Sim.

The illustration is from Mr. Sim's frond.





100

HYMENOPHYLLUM POLYANTHOS.

H. SERICEUM.

V. 11—VOL. 5

Digitized by Google







Portion of barren Frond—upper side.

## HYMENOPHYLLUM POLYANTHOS.

SWARTZ. WILLDENOW. HOOKER. HEDWIG.

PLATE VIII.—A. VOL. VIII.

<i>Hymenophyllum abietinum</i> ,	KUNZE. HOOKER & GREVILLE.
“ <i>Jalapense</i> ,	CHAMISSE & SCHLECHTENDAL.
“ “	MARTENS AND GALLEOTTI.
“ <i>Badium</i> ,	WALLICH. (Not HOOKER AND GREVILLE.)
“ <i>ricciaefolium</i> ,	KLOTZSCH.
“ <i>clavatum</i> ,	SWARTZ. WILLDENOW. KUNZE.
“ “	HEDWIG.
“ <i>sanguinolentum</i> ,	SWARTZ. SCHUHR. HEDWIG.
“ “	WILLDENOW.
“ <i>villosum</i> ,	COLENSO.
<i>Trichomanes sanguinolentum</i> ,	FORSTER.

*Hymenophyllum*—Membrane-leaved.

*Polyanthos*—Many-flowered.

An interesting species, subject to much variety in form, having very slender, arching, elegant, filmy fronds.

An evergreen stove Fern.

Native of the West Indian Islands, Peru, Mexico, Guiana, Surinam, Brazil, Nepal, Assam, Philippine Islands, Jamaica, St. Vincent, Luzon, Juan Fernandez, and New Zealand.



Fronds ovate or oblong, tripinnatifid; segments entire, brief, usually spreading.

Stipes terete, black, naked, or moderately winged above; wiry.

Involucres terminal, nearly orbicular; base slightly sunk, or free, profoundly two-valved, valves convex and entire.

Length of frond from four to twelve inches; width two inches; colour bright green.

For a frond I am indebted to Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. Sim.

The illustration is from Mr. Sim's frond.



Portion of mature Frond—upper side.

## HYMENOPHYLLUM SERICEUM.

SWARTZ. WILLDENOW. HEDWIG. HOOKER.

PLATE VIII.—B. VOL. VIII.

*Hymenophyllum tomentosum*,  
" *plumosum*,

KUNZE.  
KAULFUSS.

*Hymenophyllum*—Membrane-leaved.

*Sericeum*—Silky.

A SPLENDID rare species, clothing the rocks as with a curtain.  
An evergreen stove Fern.

Native of Jamaica, Peru, Columbia, Guatemala, Brazil, and Martinique.

Fronds soft, flexible, much elongated, narrow oblong, apex truncated, habit pendulous; primarily pinnately divided, and more especially below; pinnae lanceolate, approximate, obtuse cuneate at the base, laciniato-pinnatifid, yet not profoundly so; frond everywhere ferrugineo-sericeous, that is, densely clothed with rusty hairs, hence its name.

Stipes brief and filiform.

Veins forked, close, parallel, and lamellated.

Involucres small, and situated on the apices of the ultimate segments; orbicular, sunk, and very hirsute.

Length of frond from twelve to twenty-four inches, breadth three or four inches; the pinnæ decayed below whilst fresh and healthy above.

The whole of this family and that of *Trichomanes* require growing in a moist shady situation. The soil must be very fibry and spongy peat, to which a small quantity of silver-sand should be added. Two inches of this compost is sufficient, the remainder of the pot being entirely drainage material. The soil should rise above the rim of the pot, and the plants be pegged down upon it. Place the pot in a glazed saucer-pan, and cover with a hand-glass. The plants must always be kept moist, but not stagnant. Keep the glasses clean, and wipe them dry. Under this treatment beautiful specimens may be grown.

Mr. Sim has obligingly sent me a series of fronds of this species.

It may be procured of Mr. Sim, of Foot's Cray.

The illustration is from Mr. Sim's fronds.

## GENUS II.

## TRICHOMANES. SMITH.

A PRETTY dwarf genus with membranaceous pellucid fronds, varying from simple to decompound multifid.

Veins simple or forked, free.

Sori terminal, frequently sunk within the segments, on which they are placed.

Indusium tubular, or urceolate, the receptacle continued beyond the sporangia and mouth of the indusium, frequently elongated and filiform.

There is one British representative, the *Trichomanes radicans*. Most of the species inhabit warm climates.

Very few are cultivated in this country.

Sir W. J. Hooker, in his "Species Filicum," enumerates the following species:—

*Elegans*, *Rudge*, Central America.

*Spicatum*, *Hedwig*, Guiana.

*Nanum*, *Bory*, Guiana.

*Reniforme*, *Forster*, New Zealand.

*Membranaceum*, *Linnæus*, West Indies.

*Punctatum*, *Poiret*, Martinique.

*Reptans*, *Swartz*, Jamaica.

*Bojeri*, *Hooker and Greville*, Mauritius.

*Muscoides*, *Swartz*, West Indies.

*Krausii*, *Hooker and Greville*, Dominica.

*Erosum*, *Willdenow*, W Africa.

*Pusillum*, *Swartz*, Jamaica.

*Apodum*, *Hooker and Greville*, Barbadoes.

*Parvulum*, *Poiret*, Java.

*Proliferum*, *Blume*, Java.

*Minutum*, *Blume*, Java.

*Bifolium*, *Blume*, Java.

*Digitatum*, *Swartz*, Mauritius.

*Flabellatum*, *Bory*, Falkland Islands.

*Cuspidatum*, *Willdenow*, Bourbon.

*Intramarginale*, *Hooker and Greville*, Ceylon.

- Quercifolium*, *Hooker and Greville*, Esmeraldas.  
*Sinuosum*, *Richard*, Guadeloupe.  
*Incisum*, *Kaulfuss*, Brazil.  
*Ankersii*, *Parker*, British Guiana.  
*Brachypus*, *Kunze*, Trinidad.  
*Kaulfussii*, *Hooker and Greville*, Jamaica.  
*Trigonum*? *Desvauz*, Guiana.  
*Attenuatum*, *Hooker*, Jamaica.  
*Alatum*, *Swartz*, Jamaica.  
*Bancroftii*, *Hooker and Greville*, Jamaica.  
*Floribundum*, *Hooker*, Jamaica.  
*Pennatum*, *Kaulfuss*, Cayenne.  
*Javanicum*, *Blume*, Java.  
*Fusum*, *Blume*, Java.  
*Crispum*, *Linnaeus*, West Indies.  
*Auriculatum*, *Blume*, Java.  
*Heterophyllum*? *Hooker*, Orinoco.  
*Rigidum*, *Swartz*, Jamaica.  
*Millefolium*, *Desvauz*, Brazil.  
*Elongatum*, *Cunningham*, New Zealand.  
*Giganteum*, *Bory*, Bourbon.  
*Longisetum*, *Bory*, Bourbon.  
*Maximum*, *Blume*, Java.  
*Lambertianum*, *Hooker*, Peru.  
*Pallidum*, *Blume*, Java.  
*Dissectum*, *J. Smith*, Luzon.  
*Melanorhizon*, *Hooker*, Philippine Isles.  
*Tamarisciforme*? *Jacquin*, Mauritius.  
*Tenuifolium*? *Cavanilles*, Chiloe.  
*Diffusum*? *Blume*, Java.  
*Cupressoides*? *Desvauz*, Seychelles Isles.  
*Humile*, *Forster*, New Zealand.  
*Pyxidiferum*, *Linnaeus*, West Indies.  
*Filicula*, *Bory*, Mauritius.  
*Radicans*, *Swartz*, Europe.  
*Kunzeanum*, *Hooker*, Peru.  
*Glauco-fusum*, *Hooker*, Pacific Islands.  
*Guineense*? *Swartz*, Sierra Leone.  
*Arbuscula*? *Desvauz*, Guiana.  
*Striatum*? *Don*, Nepal.  
*Thujoides*? *Desvauz*, Mauritius.  
*Album*? *Blume*, Java.  
*Pellucens*, *Kunze*, Peru.  
*Plumosum*, *Kunze*, Peru.  
*Crinitum*, *Swartz*, Jamaica.  
*Depauperatum*? *Bory*, Onalan.  
*Venosum*, *Brown*, New Holland.  
*Cæspitosum*, *Hooker*, Staten Land.  
*Anceps*, *Hooker*, Brazil.  
*Feniculaceum*, *Bory*, Mauritius.  
*Myriophyllum*, *Desvauz*, Madagascar.  
*Bifidum*, *Ventenat*, East Indies.  
*Strictum*, *Menzies*, New Zealand.  
*Meifolium*, *Bory*, Bourbon.  
*Polyanthos*, *Hooker*, Pacific Isles.  
*Smithii*, *Hooker*, Philippine Islands.  
*Lucens*, *Swartz*, Jamaica.  
*Scandens*, *Linnaeus*, Jamaica.  
*Angustatum*, *Carmichael*, Brazil.  
*Exsectum*, *Kunze*, Juan Fernandez.  
*Trichoideum*, *Swartz*, Jamaica.  
*Parviflorum*? *Poiret*, Madagascar.

Lanceolatum? <i>DuPetit-Thouars</i> ,	Davallioides? <i>Gaudichaud</i> ,
Madagascar.	Sandwich Isles.
Stylosum? <i>Poiret</i> , Madagascar.	Venustum? <i>Desvauz</i> , Brazil.

Besides the eighty-seven species just enumerated, Sir W. J. Hooker remarks on the following:—

*T. undulatum*, *Wallich*, Mauritius. "Unknown to me."

*T. compressum*, *Desvauz*. "Not seen."

*T. alchemillæfolium*, *Wallich*, Mauritius. "Probably *T. meifolium*, or *T. achilleæfolium*."

*T. cormophyllum*, *Kaulfuss*. "Abortive pinnæ of *Alsophila capensis*."

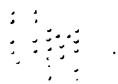
*T. capillatum*, *Taschner*. "Presl says *Didymoglossum capillatum*."

*T. flabellatum*, *Bory*. "Perhaps *T. digitatum*, *Swartz*."

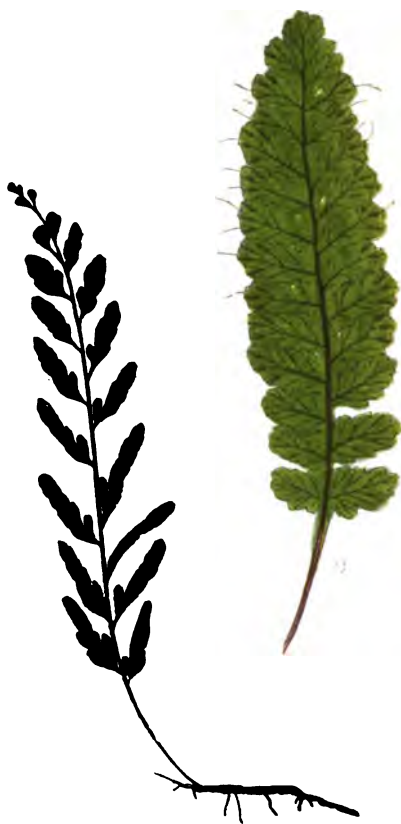
*T. adiantinum*, *Bory*, Mauritius. "No remark."

*T. loreum*, *Bory*. "Same as *T. lanceum*, *Willdenow*."





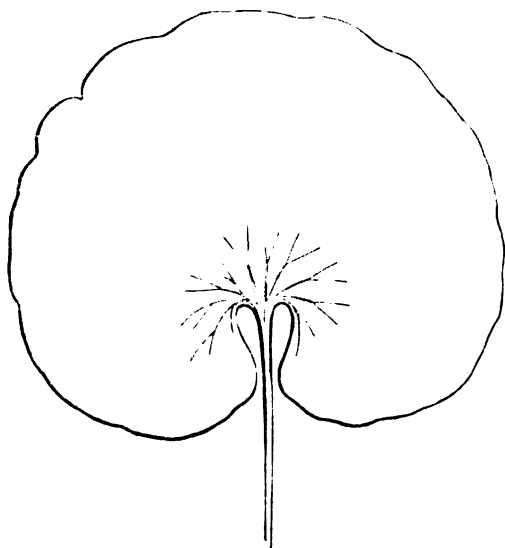




10







Mature barren Frond.

# TRICHOMANES RENIFORME.

FORSTER. HOOKER AND GREVILLE. J. SMITH.

HEDWIG. SWARTZ. WILLDENOW.

SOLANDER. BANKS. SPRENGEL. MOORE.

PLATE IX.—A.—VOL. VIII.

*Trichomanes*—From the Greek—Soft hair.      *Reniforme*—Kidney-shaped.

A CHARMING rare erect Fern.

An evergreen greenhouse species.

Native of New Zealand, where it has been found by Banks, Solander, and Forster.

Fronds coriaceous, glabrous, simple, stipitate, reniform in shape, decurrent on the stipes, lateral, and semi-pellucid.

Rhizoma slender, creeping, and very long.

Veins dichotomous, close, radiating from the base.

Sori contiguous, marginal, terminating almost every vein, cuneato-cup-shaped; columella exserted. The sori are arranged on the circular margin, like the 'cogs' of a wheel.

Length about four to six inches. Colour dark shining green. Width from two to three inches.

For fronds my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew, and Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. Sim.

The illustration is from Mr. Smith's frond.



Portion of mature Frond.

## TRICHOMANES VENOSUM.

BROWN. HOOKER AND GREVILLE.

PLATE IX.—B. VOL. VIII.

*Trichomanes*—From the Greek—Soft hair.

*Venosum*—Veiny.

A PIGMY *Jungermannia*-looking very filmy Fern, found always on the trunks of trees, and very distinct.

An evergreen greenhouse species.

Native of New Holland, Tasmania, and New Zealand, where it has been found by Dr. J. D. Hooker, Gunn, Brown, Cunningham, Menzies, and Bynoe.

Fronds pinnate, small, thin, very delicate and glistening; pinnae linear, remote, sinuate, occasionally sub-bipinnatifid, upper pinnae coadunate. Costa and veins wavy.

Involucre sunk, and urceolate-cylindrical; mouth spreading and entire. Stipes very slender and filiform.

Caudex very slender, creeping, elongate, and filiform.

Length of frond from two to five inches. Colour grassy green. Width half an inch.

For fronds my thanks are due to Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. R. Sim.

The illustration is from Mr. Sim's frond.



Portion of fertile Frond—under side.

## TRICHOMANES BANCROFTII.

HOOKER AND GREVILLE.

PLATE IX.—C. VOL. VIII.

*Trichomanes coriaceum*,

KUNZE.

*Trichomanes*—From the Greek—Soft hair. *Bancroftii*—Named after Bancroft, a Jamaica physician and botanist.

A RARE dwarf species, with wavy crispy-looking pellucid fronds, radiating from a small crown.

An evergreen stove Fern.

Native of Jamaica, St. Vincent, Surinam, Peru, Brazil, and British Guiana.

Fronds ovate, occasionally subdeltoid, deeply pinnatifid, sometimes bi-tripinnatifid, tufted, rigid, glabrous, or nearly so, segments approximate, oblong in form, usually entire, occasionally sinuato-pinnatifid, or profoundly pinnatifid.

Stipes and rachis winged, with a very broad wing extending almost to the base of the stipes.

Involucres entirely sunk in the apices of the ultimate segments, cuneato-cylindrical in form, the mouth spreading.

Caudex short and creeping.

Length of frond from one to six inches. Colour deep green. Width one inch.

My thanks are due to Mr. Sim, of Foot's Cray, for fronds. It may be procured of Mr. Sim.

The illustration is from Mr. Sim's frond.



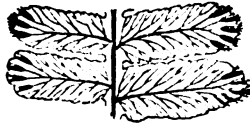




11







Portion of fertile Frond— under side.

## TRICHOMANES CRISPUM.

LINNÆUS. PLUMIER. HOOKER AND GREVILLE. J. SMITH.  
WILLDENOW. HEDWIG. KUNZE. SPRENGEL. MOORE.

PLATE X.—A. VOL. VIII.

<i>Trichomanes fastigiatum,</i>	SIEBER.
" <i>cristatum,</i>	KAULFUSS. SPRENGEL.
" <i>pilosum,</i>	RADDI. MARTIUS.
" <i>longifolium,</i>	DESSAUX. PLUMIER.
" <i>pellucens,</i>	KUNZE. LIEBMANN.
" "	HOOKER. PÆPPIG.
" <i>plumosum,</i>	KUNZE. HOOKER.

*Trichomanes*—From the Greek—Soft hair.

*Crispum*—Curled.

A VERY handsome wiry species, rare in cultivation.

An evergreen stove Fern.

Native of South and Tropical America, the West Indies, Brazil, Peru, Surinam, Mexico, and Jamaica.

Introduced into the Royal Gardens, Kew, in 1851.

Fronds sub-pinnate, hairy, segments linear-oblong, rounded at the apex, and decurrent at the base, forming a winged rachis. Fronds terminal and very membranous.

Rhizoma short and creeping.

Sori situated on the apex of the segments, vertically oblong,

and having the free prolongation of the vein exerted far beyond the margin of the indusium.

Length six to ten inches. Colour a grassy green.

For fronds my thanks are due to Mr. D. Moore, of the Glasnevin Botanic Gardens, Dublin; and to Mr. Gray, of St. Thomas', Exeter.

It may be procured of Mr. Sim, of Foot's Cray.

The illustration is from a frond sent by Mr. Moore, and was gathered from a plant imported from Jamaica.



Young sterile frond—under side.

## TRICHOMANES MUSCOIDES.

SWARTZ. HOOKER AND GREVILLE. WILLDENOW.

PLATE X.—B. VOL. VIII.

*Trichomanes hymenodes*,

HEDWIG.

*Trichomanes*—From the Greek—Soft hair.

*Muscoides*—Moss-like.

A CURIOUS elegant mossy or *Jungermannia*-looking plant, rare in cultivation and very delicate. It has pellucid fronds, somewhat oak-leaf-shaped, which rise singly from very slender, dark, creeping stems.

An evergreen stove Fern.

Native of the West Indies, Jamaica, Hispaniola, Dominica, St. Vincent, and Java.

Fronds minute, erect, simple, oblongo-lanceolate, nearly sessile,  
VOL. VIII.

G

glabrous, sinuato-pinnatifid, having an intramarginal vein; reticulations minute, in parallel lines.

Veins—a central costa, from which lateral veins diverge at very oblique angles, and are simple or dichotomous.

Involucres cuneate, wholly sunk, the mouth spreading very wide, and being level with the margin.

Caudex creeping and tomentose.

Length of frond from two to three inches. Colour a fresh grassy green. Width half an inch.

I am indebted to Mr. Sim, for a plant of this species.

It may be procured of Mr. Sim, of Foot's Cray.

The illustration is from Mr. Sim's plant.



Portion of fertile Frond—under side.

## TRICHOMANES SINUOSUM.

RICHARD. LAMARCK. HOOKER AND GREVILLE.

PLATE X.—C. VOL. VIII.

*Trichomanes quercifolium*,

DESYAUX. BORY. (*Not of* HOOKER  
AND GREVILLE.)

*Trichomanes*—From the Greek—Soft hair.

*Sinuosum*—Bended.

A RARELY-CULTIVATED Fern, with exceedingly thin membranaceous, pellucid fronds.

An evergreen stove species.

Native of Guadaloupe, and other West Indian Islands.

Fronds pinnatifid, lanceolate in form, tapering into a stipes; segments oblong-obtuse, sinuato-lobate; margin hirsute, and usually also on the veins beneath. Thin and almost transparent.

Involucres quite sunk in the segments; mouth spreading, receptacle filiform, and much exerted.

Length of frond from four to nine inches; width half an inch. Colour pale green.

My obligations are due to Mr. Sim, for fronds of this Fern. It may be procured of Mr. R. Sim, of Foot's Cray.

The illustration is from Mr. Sim's frond.









111







Portion of fertile Frond—under side.

## TRICHOMANES RADICANS.

SWARTZ. LINDLEY AND MOORE. J. SMITH. WILLDENOW.  
 SPRENGEL. KAULFUSS. KLOTZSCH.  
 ARNOTT. DEAKIN. BABINGTON. SOWERBY. PRESL.  
 HOOKER. (*Not of KUNZE, nor of HOOKER AND GREVILLE.*)

PLATE XI. VOL. VIII.

<i>Trichomanes speciosum,</i>	WILLDENOW. NEWMAN.
“ <i>pyxidiferum,</i>	HUDSON. BOLTON. WITHERING.
“ “	HULL. ( <i>Not LINNÆUS.</i> )
“ <i>brevisetum,</i>	R. BROWN. J. E. SMITH. LINK.
“ “	HOOKER. MACKAY. MACBRIGHT.
“ “	RALES. PAXTON. GALPINE.
“ <i>alatum,</i>	HOOKER. R. BROWN. ( <i>Not of</i> SWARTZ.)
“ <i>Europæum,</i>	J. E. SMITH.
“ <i>Hibernicum,</i>	SPRENGEL.
“ <i>Andrewsii,</i>	NEWMAN.
“ <i>scandens,</i>	RADDI. MARTENS AND GALLEOTTI.
“ “	HEDWIG.
“ <i>diaphanum,</i>	KUNTH.
“ <i>ambiguum,</i>	SIEBER.
“ <i>anceps,</i>	WALLICH. ( <i>Not of HOOKER.</i> )
“ <i>umbrosum,</i>	WALLICH.

<i>Trichomanes radicans</i> , var. <i>Andrewsii</i> ,	MOORE. NEWMAN.
“ <i>speciosum</i> , var. <i>Andrewsii</i> ,	NEWMAN.
“ <i>brevisetum</i> , var. <i>Andrewsii</i> ,	HENFREY.
<i>Hymenophyllum alatum</i> ,	J. E. SMITH. WILLDENOW.
	(Not of SCHUHR.)
“ <i>rupestre</i> ,	RADDI.
“ <i>Tunbridgense</i> , var.,	J. E. SMITH. WITHERING. HULL.
<i>Didymoglossum alatum</i> ,	DESAUX.
<i>Filix-humilis repens</i> ,	DILLENIIUS.

*Trichomanes*—From the Greek—Soft hair.

*Radicans*—Rooting.

A most beautiful, half-hardy, indigenous species.

Native of Ireland, growing in the counties of Cork, Kerry, Waterford, Wicklow, etc.; and formerly at Bellbank, (twelve miles from Bingley,) Yorkshire. The variety *Andrewsii* at Iveragh, Ireland.

Also found in Jamaica, Martinique, Brazil, Mexico, Vera Cruz, Xalapa, Tabasco, Esmeralda, Sandwich Isles, Owhyhee, Oahu, Nepal, Teneriffe, Madeira, Azores, Canaries, Sikkim, Bootan, Mergui, Alabama, Panama, New Grenada, Venezuela, Galapagos, Society Isles, and Equador.

Fronds glabrous, triangularly elongate, apex more or less attenuated; tri-quadrupinnatifid, segments entire, linear in form, or bluntly bifid. Pelucido-membranaceous.

Rachis winged, and decurrent on the stipes.

Stipes copiously covered with dark hair-like scales.

Sori solitary, and situated in the axils of the upper segments; extra marginal.

Indusium cylindrical.

Veins branched from the main rachis; in the fertile segment the vein is continued beyond the margin, and forms the receptacle, whilst in the barren segment it does not reach the margin.

Length of frond from six to twenty inches; colour olive green.

Rhizoma perennial and creeping; elongated, tomentose with small dark-coloured hairs.

The stipes is from a fourth to half the length of the entire frond.

This species is known as the Bristle Fern.

The variety *Andrewsii* is very distinct, having long narrow fronds, lanceolate-ovate in form, the primary divisions narrow, and, as well as the secondary ones, more distant than in the normal form. Involucres immersed, and the receptacles much elongated. We are indebted to Mr. William Andrews, of Dublin, for the discovery of this handsome variety; he found it in the year 1842, at Iveragh, Ireland.

*Trichomanes radicans* was found at Bellbank, by Bolton, in the year 1758, and he remarks that it was plentiful in this station; it is now unfortunately only a habitat of days gone by.

In Jamaica, in woods, observed by Swartz, Bancroft, and Purdie. In Brazil, according to Raddi, Forbes, Macrae, Scouler, Gardner, Sinclair, and Vautier, the variety *Andrewsii* appears to occur, bearing fronds from six to eighteen inches in length; a similar form exists in the Forest of Esmeraldas, El Equador, according to Colonel Hall. In the Azores, Dr. Hochstetter and Mr. H. C. Watson discovered it at an elevation of from two to three thousand feet above the level of the sea.

This Fern, in a wild state, grows on damp shady rocks, and delights to be within the spray of a waterfall. Under proper cultivation it can be made to be even more handsome than when growing in its own wild habitat; on the other hand, under imperfect cultivation, it is an unsightly Fern. It must be borne in mind that the fronds live three or four years, and in the case of barren fronds some have been known to keep green and fresh as long as ten years; it is therefore desirable that they should not be subject to injury.

Mr. Joseph Henderson, of Wentworth, has both the normal form and the variety *Andrewsii* growing in magnificent luxuriance; indeed those who have seen it in its wild state, say that the Wentworth specimens eclipse them. Mr. Henderson's plan is to grow it under a large hand-glass, the *top* only of which lifts off, by which means the plant can be examined without injury to the fronds in taking off and putting on the hand-glass. The fronds entirely fill the space allotted to them, like a dense miniature forest. With my own plants I have followed a similar plan; the plants are potted in large saucers, on pieces of broken crock and freestone, with a slight portion of vegetable mould and silver-sand, below which the saucer had been previously well drained, and upon this drainage a



layer of sphagnum moss had been laid; this saucer is then placed within a larger one, and the latter filled several inches deep with water, so as to form a canal of water round the plant, upon the whole of which is placed a square hand-glass, opening at the top, and having several holes, in order to carry off the superfluous moisture. By this means the plant is always properly damp, and yet no amount of vapour remains on the sides of the glass; were it to do so, young fronds touching the sides would rapidly decay. Before I used this plan my fronds were always turning a blackish colour, even when quite young; now the fresh greenness is retained with them all, and even those that were discoloured, have in part regained their greenness.

The creeping almost black hirsute rhizoma attaches itself to the stones, and over the edges of the saucer, in the manner of ivy. This plant requires shade as well as moisture to induce a healthy growth, and it will either flourish in a stove or greenhouse—the latter appears to be its favourite climate.

Dr. Forbes Young showed me plants growing on the rocks in his stove fernery under the shade of large Ferns and climbing plants, without any covering over it, and they appeared to be in excellent condition.

Mr. Moore mentions that "Mr. Calwell, a very successful grower of this species, received, in the spring of 1843, a small portion of rhizoma with one partially-developed frond, and another just appearing, and this was placed within a bell-glass, about fifteen inches in diameter. In December, 1846, it had quite filled the glass, and was removed into a case, three feet ten inches by two feet six inches, and three feet four inches high. The space beneath for about twelve inches in depth, was filled with up-turned flower-pots, charcoal, cocoa-nut husks, and light earth and peat. The plant, in 1852, had filled this case also, having about two hundred and thirty fully-developed fronds, of from fourteen to twenty inches in length. When removing it to the case, in 1846, five or six fronds which had been injured by contact with the glass, were cut away, but since that time, up to 1852, not one of the fronds then existing, nor any of those subsequently formed, had shewn any symptoms of decay." It will thus be apparent that this Fern is, from its great beauty, as well as from the durability of its fronds, worthy

of the slight extra trouble attending upon its proper management.

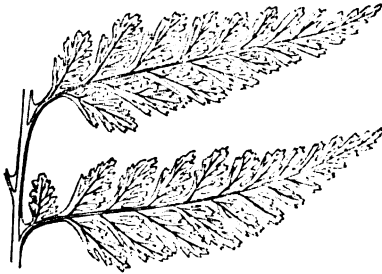
The *Hymenophyllums* glory in a similar treatment.

Introduced into the Royal Gardens, Kew, in 1793.

For plants my thanks are due to Mr. William Andrews, of Dublin; Mr. James, of Vauvert; and to Mr. Joseph Henderson, of Wentworth; and for the variety *Andrewsii* also to Mr. Andrews and Mr. J. Henderson.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Rol-lisson, of Tooting; A. Henderson, of Pine-apple Place; and Booth, of Hamburg.

The illustrations are from plants in my own collection.



Portion of a frond of the variety *Andrewsii*.



## GENUS III.

## DAVALLIA. SWARTZ.

THE genus *Davallia* has been divided into several families, as *Humata*, *Davallia*, *Leucostegia*, *Odontosoria*, and *Microlepia*. Sir W. J. Hooker, in his "Species Filicum," connects them all together again; and indeed the similarity in many respects is so striking that it did not seem wise to change the tribe comprising *Davallia* into half a dozen families, and we therefore must feel obliged to Sir William Hooker, for removing a number of unnecessary names, as far as genus is concerned.

Those Ferns constituting *Humata* have linear-lanceolate, entire, pinnatifid, or deltoid-bipinnatifid fronds; those of *Davallia* usually deltoid, pinnate, or bi-tripinnate. In *Leucostegia* deltoid, tripinnatifid, or multifid; occasionally lanceolate and bipinnatifid. In *Odontosoria* bi-tripinnatifid, lanceolate, or deltoid. In *Microlepia* pinnate or bi-tripinnatifid.

Veins forked; venules free.

Sori terminal and vertical. Indusium tubular, more or less.

Length of frond from three to seventy inches.

Mr. J. Smith gives the following in his "Catalogue of the Ferns cultivated at Kew:"—

Humata heterophylla, <i>J. Smith.</i>	Davallia Canariensis, <i>Swartz.</i>
pedata, <i>J. Smith.</i>	Lindleyi, <i>Hooker.</i>
Davallia pentaphylla, <i>Blume.</i>	Leucostegia immersa, <i>Presl.</i>
ornata, <i>Wallich.</i>	chærophylla, <i>J. Smith.</i>
solida, <i>Swartz.</i>	Odontosoria tenuifolia, <i>J. Smith.</i>
pyxidata, <i>R. Brown.</i>	aculeata, <i>J. Smith.</i>
elegans, <i>Swartz.</i>	Microlepia cristata, <i>J. Smith.</i>
divaricata, <i>Blume.</i>	platyphylla, <i>J. Smith.</i>
dissecta, <i>J. Smith.</i>	polypodioides, <i>Presl.</i>
bullata, <i>Wallich.</i>	Novæ Zelandiæ, <i>J. Smith.</i>

Sir W. J. Hooker, in his "Species Filicum," in his *Davallias* of the whole world gives—

- |   |   |
|---|---|
| <p>Heterophylla, <i>Smith</i>, Malay.<br/>         Angustata, <i>Wallich</i>, Singapore.<br/>         Parallela, <i>Wallich</i>, Singapore.<br/>         Pectinata, <i>J. Smith</i>, Otaheite.<br/>         Alata, <i>Blume</i>, Java.<br/>         Bipinnatifida, <i>Blume</i>, Java.<br/>         Novæ Zelandiæ, <i>Colenso</i>, New Zealand.<br/>         Membranulosa, <i>Wallich</i>, Nepal.<br/>         Falcinella, <i>Presl</i>, Malay.<br/>         Solida, <i>Swartz</i>, Pacific Isles.<br/>         Lindleyi, <i>Hooker</i>, New Zealand.<br/>         Caudata, <i>Cavanilles</i>, Philippine Islands.<br/>         Patens, <i>Swartz</i>, East Indies.<br/>         Decurrens, <i>Hooker</i>, Philippine Isles.<br/>         Canariensis, <i>Smith</i>, Canary Isles.<br/>         Pyxidata, <i>Cavanilles</i>, New Holland.<br/>         Calvescens, <i>Wallich</i>, Kamoun.<br/>         Khasiyana, <i>Hooker</i>, India.<br/>         Lonchitidea, <i>Wallich</i>, Nepal.<br/>         Pinnata, <i>Cavanilles</i>, Philippine Isles.<br/>         Luzonica, <i>Hooker</i>, Luzon.<br/>         Serrata, <i>Blume</i>, Java.<br/>         Boryana, <i>Presl</i>, Bourbon.<br/>         Trichosticha, <i>Hooker</i>, Isle of Samar.<br/>         Ciliata, <i>Hooker</i>, Luzon.<br/>         Gracilis, <i>Blume</i>, Java.<br/>         Moluccana, <i>Blume</i>, Moluccas.<br/>         Splendens, <i>Blume</i>, Isle of Banda.<br/>         Brasiliensis? <i>Hooker</i>.<br/>         Manilensis? <i>Hooker</i>.</p> | <p>Humilis? <i>Hooker</i>.<br/>         Aculeata, <i>Swartz</i>, West Indies.<br/>         Fumarioides, <i>Swartz</i>, West Indies.<br/>         Gibberosa, <i>Swartz</i>, Pacific Isles.<br/>         Lindenii, <i>Hooker</i>, Caraccas.<br/>         Schimperii, <i>Hooker</i>, Abyssinia.<br/>         Concinna, <i>Schrader</i>, S. Africa.<br/>         Pedata, <i>Swartz</i>, Mauritius.<br/>         Intramarginalis, <i>Blume</i>, Java.<br/>         Sessilifolia, <i>Blume</i>, Java.<br/>         Belangeri, <i>Bory</i>, Java.<br/>         Immersa, <i>Wallich</i>, India.<br/>         Nodosa, <i>Hooker</i>, Java.<br/>         Chærophylla, <i>Wallich</i>, India.<br/>         Parvula, <i>Wallich</i>, Singapore.<br/>         Pulchra, <i>Don</i>, Nepal.<br/>         Bipinnata? <i>Hooker</i>, West Indies.<br/>         Mauritiana, <i>Hooker</i>, Mauritius.<br/>         Elegans, <i>Swartz</i>, China.<br/>         Nitidula, <i>Kunze</i>, Africa.<br/>         Divaricata, <i>Blume</i>, Java.<br/>         Polyantha, <i>Hooker</i>, Singapore.<br/>         Vogelii, <i>Hooker</i>, Fernando Po.<br/>         Saccoloma, <i>Sprengel</i>, Brazil.<br/>         Imrayana, <i>Hooker</i>, Dominica.<br/>         Pulchella, <i>Hooker</i>, Luzon.<br/>         Parkeri, <i>Hooker</i>, British Guiana.<br/>         Hemiptera, <i>Bory</i>, Java.<br/>         Adiantifolia, <i>Hooker</i>, Molucca.<br/>         Kunzeana, <i>Hooker</i>, Java.<br/>         Blumeana, <i>Hooker</i>, Java.<br/>         Tenuifolia, <i>Swartz</i>, East Indies.<br/>         Trichomanoides, <i>Blume</i>, Java.<br/>         Chinensis, <i>Swartz</i>, China.<br/>         Clavata, <i>Swartz</i>, West Indies.</p> |
|---|---|

- Retusa*, *Cavanilles*, Philippine Isles.  
*Bifida*, *Hooker and Greville*, Brazil.  
*Goudotiana*, *Kunze*, Madagascar.  
*Schlechtendahlia*, *Presl*, Mexico.  
*Meifolia*, *Hooker*, Caraccas.  
*Glauc?* *Cavanilles*, Peru.  
*Hirsuta?* *Swartz*, Japan.  
*Magellanica?* *Desvoux*, *Magelhaens*.  
*Pellucida?* *Desvoux*.  
*Urophylla?* *Wallich*, Sylhet.  
*Cordifolia?* *Roxburgh*, Rohilcunde.  
*Serrata?* *Roxburgh*, Prince of Wales Island.  
*Serrata*, *Willdenow*, Marianne Isles.  
*Alpina*, *Blume*, Java.  
*Cumingii*, *Hooker*, Philippine Isles.  
*Vestita*, *Blume*, Java.  
*Affinis*, *Hooker*, Luzon.  
*Emersoni*, *Hooker and Greville*, Ceylon.  
*Contigua*, *Swartz*, Pacific Isles.  
*Preslii*, *Hooker*, Luzon.  
*Triphylla*, *Hooker*, Singapore.  
*Pentaphylla*, *Blume*, Java.
- Elata*, *Swartz*, Otaheite.  
*Fejeensis*, *Hooker*, Fejee.  
*Mucronata*, *Blume*, Java.  
*Griffithiana*, *Hooker*, India.  
*Bullata*, *Wallich*, Nepal.  
*Hookeriana*, *Wallich*, Assam.  
*Villosa*, *Wallich*, Nepal.  
*Amboynensis*, *Hooker*, Amboyna.  
*Inæqualis*, *Kunze*, Peru.  
*Distans*, *Kaulfuss*, Brazil.  
*Hirta*, *Kaulfuss*, Sandwich Isles.  
*Polypodioides*, *Don*, Tropics.  
*Proxima*, *Blume*, Java.  
*Jamaicensis*, *Hooker*, Jamaica.  
*Thecigera*, *Hooker*, Venezuela.  
*Cuneiformis*, *Swartz*, Pacific Isles.  
*Biflora*, *Kaulfuss*, Manilla.  
*Triloba?* *Willdenow*, Hispaniola.  
*Trifoliata?* *Swartz*, Hispaniola.  
*Capillacea?* *Willdenow*, Hispaniola.  
*Thalictroides?* *Presl*.  
*Flexuosa?* *Sprengel*.  
*Pilosa?* *Roxburgh*, Ganges.  
*Trapeziformis?* *Roxburgh*, Malaccas.  
*Cuneifolia?* *Hooker*.

Sir W. Hooker describes one hundred and twelve species in the genus *Davallia*.

We have no British representative.



22















Pinna of fertile Frond—under side.

## DAVALLIA CANARIENSIS.

SWARTZ. HOOKER. LODDIGES. SMITH. WILLDENOW.  
 LINK. J. SMITH. KUNZE. H. LOWE. FINLAY.  
 SALTZMANN. MASSON. LEMANN. FEE.  
 SCHOTT. PAXTON. PRESL. KAULFUSS. SPRENGEL.

PLATE XII. VOL VIII.

*Trichomanes Canariensis*,  
*Polypodium Lusitanicum*,

LINNÆUS. JACQUIN.  
 LINNÆUS.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Canariensis*—Canary Island.

AN old favourite, known as the Hare's Foot Fern, and certainly a beautiful species. It has been cultivated in our green-houses one hundred and sixty years.

An evergreen greenhouse Fern.

Native of South Europe, Madeira, Canary Islands, Portugal, and Tangiers.

Introduced into the Royal Gardens, Kew, as long ago as 1699.

Fronds glabrous, triangular in form, three-branched, supra-decompound, primary pinnæ very broad, pinnules lanceolate,

profoundly pinnatifid, base decurrent, segments linear-dentate or bidentate. Fronds lateral and subcoriaceous.

Sori solitary, terminal, and cuneato-cup-shaped.

Rhizoma caudiciform, brief, stout, densely scaly, and somewhat scandent.

Veins forked.

Length of frond twelve to eighteen inches. Colour a rich green.

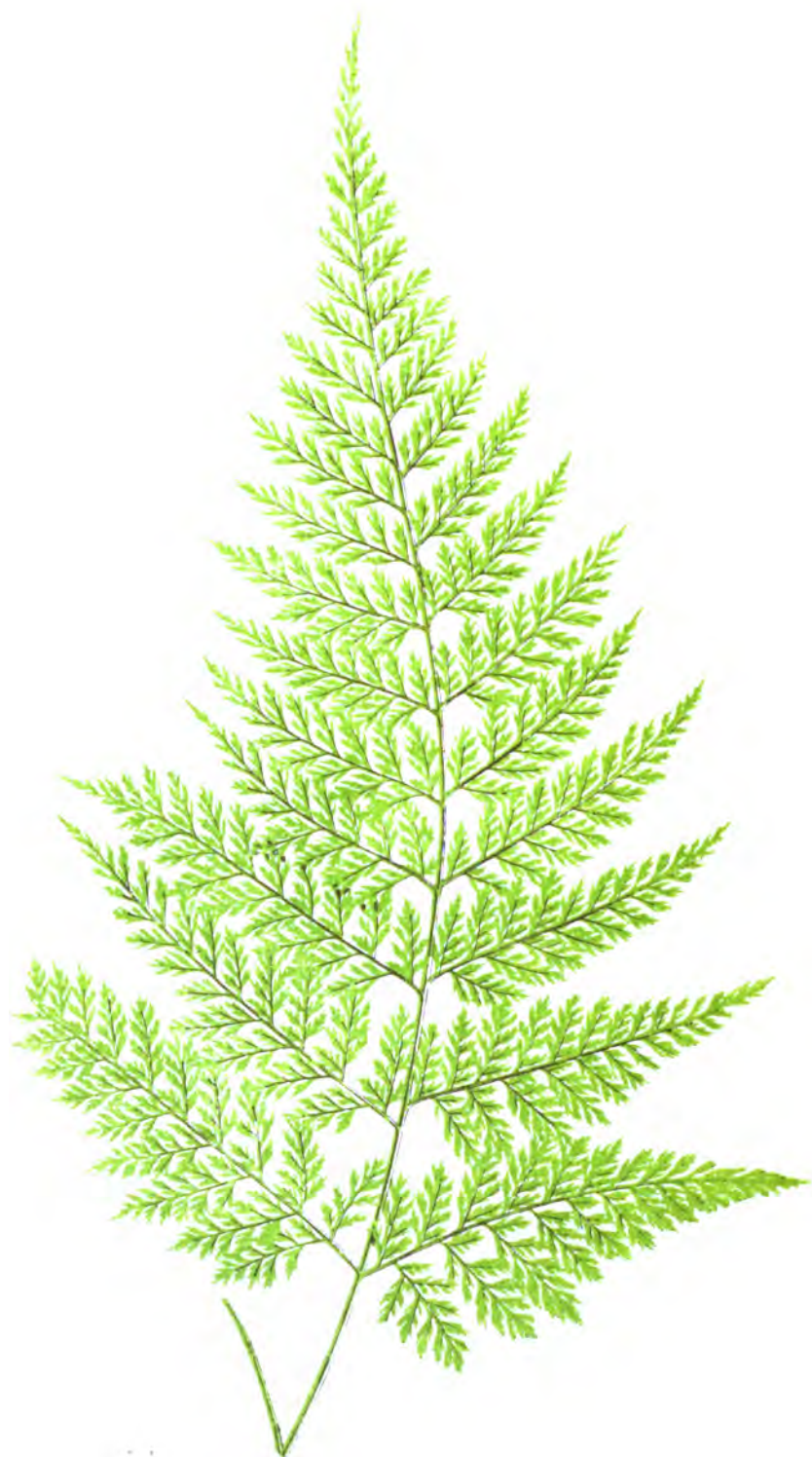
For plants my thanks are due to M. Schott, Director of the Imperial Gardens of Schonbrunn; and to Mr. R. Sim, Foot's Cray, Kent.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.







111







Sterile Pinna.

# DAVALLIA CHÆROPHYLLA.

WALLICH. HOOKER. FEE. PRESL.

PLATE XIII. VOL. VIII.

<i>Leucostegia chærophylla</i> ,	J. SMITH.
“ <i>ligulata</i> ,	J. SMITH.
“ <i>pulchra</i> ,	J. SMITH.
<i>Davallia pulchra</i> ,	WALLICH. DON.
“ “	SPRENGEL. HOOKER.
<i>Acrophorus chærophyllus</i> ,	MOORE.
“ <i>pulcher</i> ,	MOORE.
<i>Cystopteris squamata</i> ,	DECAISNE.
<i>Humata chærophylla</i> ,	METTENIUS.
<i>Aspidium hymenophylloides</i> ,	BLUME.

*Davallia*—Named in honour of E. Davall, a Swiss Botanist.  
*Chærophylla*—Chervil-leaved.

## IN THE SECTION LEUCOSTEGIA OF AUTHORS.

A CHARMING delicate-looking plant, rare in cultivation in this country.

A stove Fern.

Native of the East Indies, Nepal, Simla, Assam, Maamloo,

VOL. VIII.

I

Khasiya, Masuri, Kamaon, Kashmir, Neilgherries, Sirmur, Kunawar, Java, and Penang.

Fronds smooth, ovate-acuminate, flaccid, membranaceous, three to four times pinnate; primary pinnæ oblong-ovate and acuminate, others ovate-obtuse; pinnules lanceolate and profoundly pinnatifid.

Sori rather large, reniform, and situated at the centre of the segment, below the base of the tooth, and at the axil of a pair of veinlets.

Stipes six to eight inches in length, slightly scaly below.

Rhizoma caudiciform, creeping, stout, and clothed with compact, broad, imbricated scales.

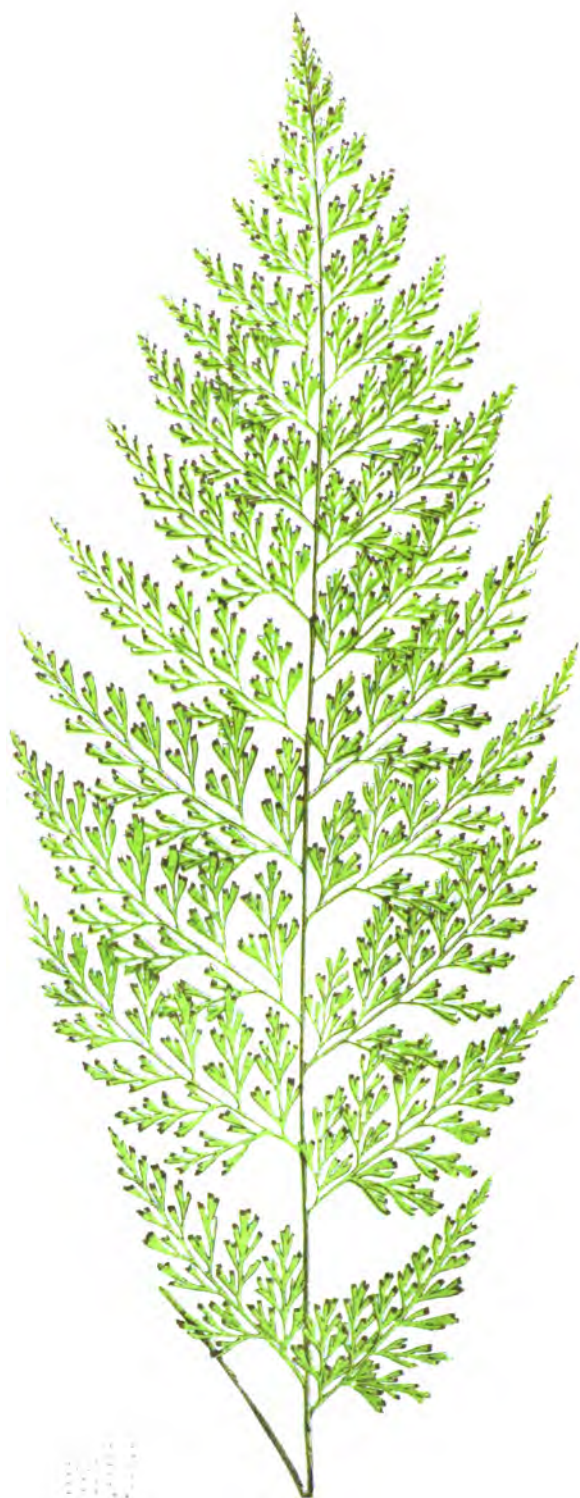
Length of frond from twelve to twenty-four inches; colour pale green, and when young slightly pink.

My thanks are due to Mr. D. Moore, Botanic Gardens, Glasnevin, Dublin, for a frond of this Fern.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood, and Sim, of Foot's Cray.

The illustration is from a frond forwarded by Mr. D. Moore.





ADIANTUM TENUIFOLIUM.  
XIV-VI S.









Pinna—under side.

## DAVALLIA TENUIFOLIA.

SWARTZ. HOOKER. WILLDENOW. PRESL. BLUME.  
 SCHOTT. SPRENGEL. KUNZE.  
 (Not of PÆPPIG, nor of WILLDENOW, FEE, or CUMING.)

PLATE XIV. VOL. VIII.

*Odontosoria tenuifolia,*

*Davallia remota,*

“ “

“ *ferruginea,*

*Adiantum cuneatum,*

*Stenoloma tenuifolium,*

J. SMITH.

KAULFUSS. HOOKER & ARNOTT.

BORY. DUPERREY.

REINWARDT.

FORSTER. (Not of LINNÆUS,  
 LANGSDORFF AND FISCHER,  
 RADDI, HOOKER, SMITH,  
 MOORE, ETC.)

FEE.

*Davallia*—Named in honour of Edmund Davall, a Swiss Botanist.  
*Tenuifolia*—Slender-leaved.

IN THE SECTION ODONTOSORIA OF AUTHORS.

AN exceedingly beautiful Fern, not generally met with in ordinary collections, having smooth, slender fronds, and somewhat *Onychium*-looking.

An evergreen stove Fern.

Native of the East Indies, the Malay Archipelago, Java, Assam, Nepal, Ceylon, Madras, Mauritius, China, Sandwich Isles, Madagascar, and Luzon.

Fronde erect, ovate-lanceolate in shape, usually spreading, elongate, glabrous, subcoriaceous, and bi-tripinnatifid; segments approximate, forked, linear-cuneate, and truncate; apex slightly erose.

Rhizoma short and creeping, woolly and caudiciform.

Stipes lengthy.

Sori solitary, or in pairs.

Length of frond from eighteen to twenty-four inches; width from four to six inches. Colour a grassy green.

For a plant my thanks are due to M. Schott, Director of the Imperial Gardens, Schonbrunn, Vienna; and for fronds to Sir W. J. Hooker, Director of the Royal Gardens, Kew; Mr. D. Moore, of the Glasnevin Botanic Gardens; to Mr. Joseph Henderson, of Wentworth; and to Mr. G. Norman, of Hull.

It may be procured of all the principal Nurserymen.

The illustration is from a plant in my own collection.





Adiantum

Adiantum (L.) Sw. - Gen. of Ferns.

Adiantum

Digitized by Google







Portion of pinna of fertile Frond—upper side.

## DAVALLIA IMMERSA.

WALLICH. HOOKER.

PLATE XV. VOL. VIII.

*Leucostegia immersa*,  
 “ “  
*Acrophorus immersus*,  
*Humata immersa*,  
*Cystopteris dimidiata*,

PRESL. J. SMITH. HOOKER.  
 MOORE AND HOULSTON.  
 MOORE.  
 METTENIUS.  
 DECAISNE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Immersa*—Immersed, because the spore-cases are sunk within the frond.

### IN THE SECTION LEUCOSTEGIA OF AUTHORS.

A VERY beautiful delicate-looking peculiar pale green slender Fern.

A deciduous stove species.

Native of the East Indies and Northern India, Nepal, Assam, Mussoorie, Khasya, Kashmir, Sikkim, Moulmein, and Java.

Imported into England in 1849, by Messrs. Rollisson, of Tooting.

The fronds glabrous, deltoid, bi-tripinnate, the pinnæ alternate, triangularly-elongate, pinnatifid, ovate-lanceolate; apices caudate. Pinnules alternate, profoundly pinnatifid, oblong in shape, and

VOL. VIII.

K



membranaceous, opaque; segments somewhat ovate; apex bluntly toothed or bifid.

Fronds lateral. Stipes six to twelve inches in length, brownish beneath, green above.

Rhizoma creeping, downy, and fibrous.

Veins forked, venules direct and free. Veins indistinct, except at the free apices.

Spore cases vertical. Sori circular, terminal, and situated in the sinus close to the margin. Indusium orbicular and large.

Length of frond usually twelve to eighteen inches; my plant has fronds twenty-eight inches in length. Colour very pale yellowish green.

For plants my thanks are tendered to Mr. Masters, Exotic Nursery, Canterbury; and to Mr. R. Sim, of Foot's Cray, Kent; and for fronds to Mr. Joseph Henderson, of Wentworth; and Mr. J. Smith, Royal Gardens, Kew.

It is in the Catalogues of Messrs. E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; Veitch, of Chelsea; Rol-  
lisson, of Tooting; A. Henderson, of Pine-apple Place; and Booth, of Hamburg.

The illustration is from a plant in my own collection.





100







Portion of pinna of fertile Frond—under side.

# DAVALLIA NOVÆ-ZELANDIÆ.

COLENZO. HOOKER. FEE.

PLATE XVI. VOL VIII.

*Microlepia Novæ-Zelandiæ,*  
*Davallia hispida.*  
*Acrophorus hispidus,*

J. SMITH.  
 HEWARD.  
 MOORE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Novæ-Zelandiæ*—New Zealand.

## IN THE SECTION MICROLEPIA OF AUTHORS.

AN exceedingly beautiful dwarf Fern, with a close habit, and producing a dense mass of compact fronds. A suitable exhibition plant.

An evergreen greenhouse Fern, preferring a damp atmosphere, and a shady situation.

Native of New Zealand.

Fronds ovate acuminate, membranaceous, tripinnate, divisions distant, ultimate pinnules profoundly pinnatifid, lanceolate, pinnæ

sometimes opposite or sub-opposite, but as often alternate and ascending.

Involucres subreniform, situated mostly on the lateral tooth, large, often as large as the segment on which it is situated.

Stipes shining, and mahogany brown in colour; six to eight inches in length.

Rachis shining, and often the same colour as the stipes, flexuose and slender.

Caudex creeping, slender, hirsute with ferruginous hairs, which are soft and jointed.

Length of frond from eight to twelve inches; width four to five inches. Colour brownish green, somewhat glossy, much paler beneath.

For plants my thanks are due to M. Schott, Director of the Imperial Gardens of Schonbrunn; to Mr. Kennedy, of the Bedford Conservatory, Covent Garden; and to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

It may be procured of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; Kennedy, of Covent Garden; and Cooling, of Derby.

The illustration is from a plant in my own collection.







111







Portion of pinna of fertile Frond—under side.

## DAVALLIA LINDLEYI.

HOOKER. J. SMITH. FEE.

PLATE XVII. VOL. VIII.

*Davallia attenuata*,

OF GARDENS, (*not of* SCHOTT.)

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.

*Lindleyi*—Named after Professor John Lindley, a well-known Botanist of the present day.

A FINE species, as yet rare in cultivation.

An evergreen greenhouse Fern.

Native of New Zealand.

Fronds coriaceous, glabrous, bi-tripinnate, deltoideo-ovate. Pinnæ pinnatifid. Ultimate pinna and segments lanceolate, pinnatifid.

Sterile segments broad.

Sori somewhat half cup-shaped.

Stipes very long.

Rhizoma caudiciform, creeping, short, thick, and densely clothed with scales.

Length of frond three feet. Colour rich green.

For fronds my thanks are due to Mr. David Moore, of the Glasnevin Botanic Gardens; and to Mr. J. Smith, Royal Gardens, Kew.

It is not in any of the Nurserymen's Catalogues.

The illustration is from Mr. Moore's frond.





20

CAVALIA PENTAPHYLLA.

XV. 11. Vol. 8.

Digitized by Google









Portion of pinna of fertile Frond—under side.

## DAVALLIA PENTAPHYLLA.

BLUME. KUNZE. J. SMITH. HOOKER. ZOLLINGER.  
MOORE AND HOULSTON.

PLATE XVIII. VOL. VIII.

*Scyphularia pentaphylla*,

FEE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Pentaphylla*—Five-leaved.

A DISTINCT pretty dwarf Fern, very suitable for suspension in a basket.

An evergreen stove Fern.

Native of Malayan Archipelago and Java.

Introduced about ten years ago by Messrs. Veitch, of Exeter; and Messrs. Rollisson, of Tooting.

Fronds glabrous, pinnate, pinnæ usually five—two pairs and a terminal one—occasionally three pairs and a terminal one—lanceolate in shape, petiolate, coriaceous, base cuneate, margin crenato-serrate. Length of pinnæ four and a half inches, and terminal one five inches; width of fertile pinnæ three-eighths of an inch, and of sterile pinnæ three-quarters of an inch.

Fronds lateral.

Veins forked, immersed, and very indistinct.

Rhizoma creeping, about the thickness of a goose quill, and

densely clothed with long narrow hair-like dark brown scales,

Length of frond four to twelve inches, of which the lower five inches in a twelve-inch frond is naked. Colour bright shining green.

Stipes glabrous.

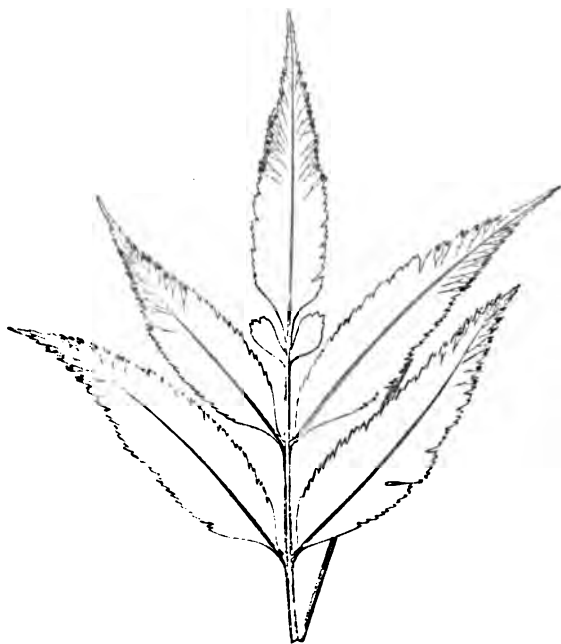
Fertile fronds contracted, ternate, elongate, occasionally a frond may be found more or less bearing sori, yet not contracted.

Sori oblong, marginal, but keeping within the edge, convex on both sides of the frond, about forty pairs on each pinna, and sixty pairs on the terminal one.

For a plant my thanks are due to Mr. Thomas Moore, Curator of the Botanic Gardens, Chelsea.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple place; Rolliison, of Tooting; Veitch, of Chelsea; Sim, of Foot's Cray; Kennedy, of Covent Garden; Cooling, of Derby; and Stansfield, of Todmorden.

The illustrations are from a plant in my own collection.



An uncontracted Frond bearing fructification.





NU







Portion of fertile Frond—under side.

## DAVALLIA HETEROPHYLLA.

SMITH. HOOKER AND GREVILLE. WILLDENOW.  
SWARTZ. SPRENGEL. CUMING.

PLATE XIX. VOL. VIII.

<i>Davallia pinnatifida</i> ,	SWARTZ. HOOKER AND BAUER.
" "	WILLDENOW. SPRENGEL.
" "	HOOKER AND GREVILLE.
" <i>lobulosa</i> ,	WALLICH.
<i>Humata heterophylla</i> ,	J. SMITH. HOOKER.
" <i>ophioglossa</i> ,	CAVANILLES. FEE.
" <i>pinnatifida</i> ,	CAVANILLES. FEE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Heterophylla*—Various-leaved.

### IN THE SECTION HUMATA OF AUTHORS.

A VERY distinct pretty dwarf Fern, only to be met with in good collections. The sterile and fertile fronds being very different, hence its name.

An evergreen stove Fern.

Native of Malayan Archipelago, Sumatra, Java, Penang, and Singapore.

Fronds solitary, fertile and sterile different, the former con-

VOL. VIII.

L



tracted in width, coriaceous, stipitate, and arising from a scaly bulb. Sterile frond simple, entire, oblong or ovate-lanceolate; apex acuminate, frequently waved. Fertile fronds much narrower, linear-lanceolate, acuminate, and profoundly sinuato-pinnatifid, the lobes being horizontal and crenate.

Veins branched, sunk, and indistinct.

Caudex long, creeping, and scaly, with dark brown scales.

Involucres reniforme, and copious on the crenatures of the lobes, four to six on each lobe, flattish.

Stipes from half an inch to two inches in length, naked, slightly winged upwards.

Length of frond from three to five inches, the fertile one being the longest, varying much in width, the sterile frond usually nearly an inch in width, and the fertile one half an inch.

My thanks are due to Mr. James Veitch, of the Exotic Nursery, Chelsea, for a plant and fronds of this Fern.

Introduced into England about two years ago by Mr. Veitch, of Chelsea.

It may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; and Rollisson, of Tooting.

The illustration is from a plant in my own collection.





100







Portion of pinna of fertile Frond.—under side.

## DAVALLIA DISSECTA.

J. SMITH. MOORE.

PLATE XX. VOL. VIII.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Dissecta*—Dissected.

An exceedingly beautiful Fern when well grown, and easily cultivated.

An evergreen stove species.

From the Malayan Archipelago and Java.

Introduced in 1849, by Messrs. Rollisson, of Tooting.

Fronds glabrous, triangular in form, slender, tri-quadripinnate, the pinnæ triangularly-elongate, acuminate, and membranous. Pinnules oblong, profoundly pinnatifid, having linear dentate segments; base decurrent. Fronds lateral.

Veins forked.

Rhizoma scandent, slender, lengthy, and densely clothed with narrow reddish brown scales, which curl round.

Rachis, midrib of pinnæ, and pinnules winged. Stipes slightly hirsute, brown below, green above, and fluted.

Length of frond twelve to twenty-four inches, of which the lower six to eight inches is naked. Width of frond ten inches. Colour light green.

Involucres one on each segment of the fertile frond.

For plants I am indebted to Mr. Moore, of the Botanic Gardens, Chelsea; and to Messrs. Rollisson, of Tooting.

It is in the Catalogues of Messrs. Rollisson, of Tooting; Veitch, of Chelsea; Sim, of Foot's Cray; Kennedy, of Covent Garden; Jackson, of Kingston; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Booth, of Hamburg; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.













Portion of pinna of fertile Frond—under side.

## DAVALLIA PYXIDATA.

R. BROWN. HOOKER. J. SMITH. CAVANILLES.  
SWARTZ. WILLDENOW. PAXTON. KUNZE. SIEBER. LINK.  
KAULFUSS. SPRENGEL. FEE. MOORE AND HOULSTON.

PLATE XXI. VOL. VIII.

*Davallia arborea*,

“ *solida*,

*Humata pyxidata*,

CONTINENTAL GARDENS.

HOOKER AND ARNOTT. (*Not*  
*of SWARTZ.*)

DESVAUX.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.

*Pyxidata*—Box-like.

ANOTHER old favourite of our gardens, easily grown, and well worthy of cultivation.

A deciduous warm greenhouse Fern.

Native of New Holland, Australia, Norfolk Island, and Sidney.

Introduced into the Royal Gardens, Kew, in 1808, having been received from Mr. Caley.

This shrubby-habited Fern has glabrous fronds, deltoid, tri-pinnate, the pinnules oblong, pinnatifid, segments oblong-obtuse and dentate, base decurrent.

Fronds lateral.

Rhizoma frutescent and erect, scaly, the scales lying flat, slender, rising to the height of three or four feet.

Length of frond eighteen to twenty-four inches. Colour light green.

Stipes green.

For plants my thanks are due to Messrs. Booth, Nurserymen, Hamburg; and Mr. Masters, of the Exotic Nursery, Canterbury.

It may be procured of any Nurseryman.

There seems to be two forms of this Fern in cultivation, that under the name of *Davallia arborea* being the handsomer of the two.

The illustration is from a plant in my own collection.





Botanical  
 Illustration  
 of  
 Adiantum  
 species









Portion of pinna of fertile Frond—under side.

## DAVALLIA ELEGANS.

SWARTZ. HOOKER. J. SMITH. WILLDENOW.  
WALLICH. KUNZE. SPRENGEL. FEE. PAXTON.

PLATE XXII. VOL. VIII.

<i>Davallia bidentata</i> ,	SCHKUEHR.
" <i>coniifolia</i> ,	WALLICH.
<i>Humata elegans</i> ,	DESAUX.
<i>Adiantum denticulatum</i> ,	HOULTUYN, ( <i>not of SWARTZ,</i> WILLDENOW, <i>or HOOKER.</i> )

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Elegans*—Elegant.

A MAGNIFICENT Fern, deserving a place in every collection, yet by no means common in cultivation in this country.

An evergreen stove species.

Native of the West Indies, Java, Malayan Archipelago, Philippine Islands, China, Madagascar, Otaheite, Ceylon, New Holland, Penang, and Madras.

Introduced into the Royal Gardens, Kew, in 1844, by Mr. D. Cameron.

This Fern is remarkable for the elegant divisions of its fronds, and for the dark coloured lines on its segments, giving a striated appearance.

Fronds tall, subcoriaceous, ovate-acuminate in form, tri-quadripinnate, pinnules lanceolate, pinnatifid, acuminate and striated. Ultimate pinnules lobato-crenate.

Caudex stout, creeping, scaly, and woolly.

Veins branched.

Length of frond twenty-four inches. Colour bright shining green.

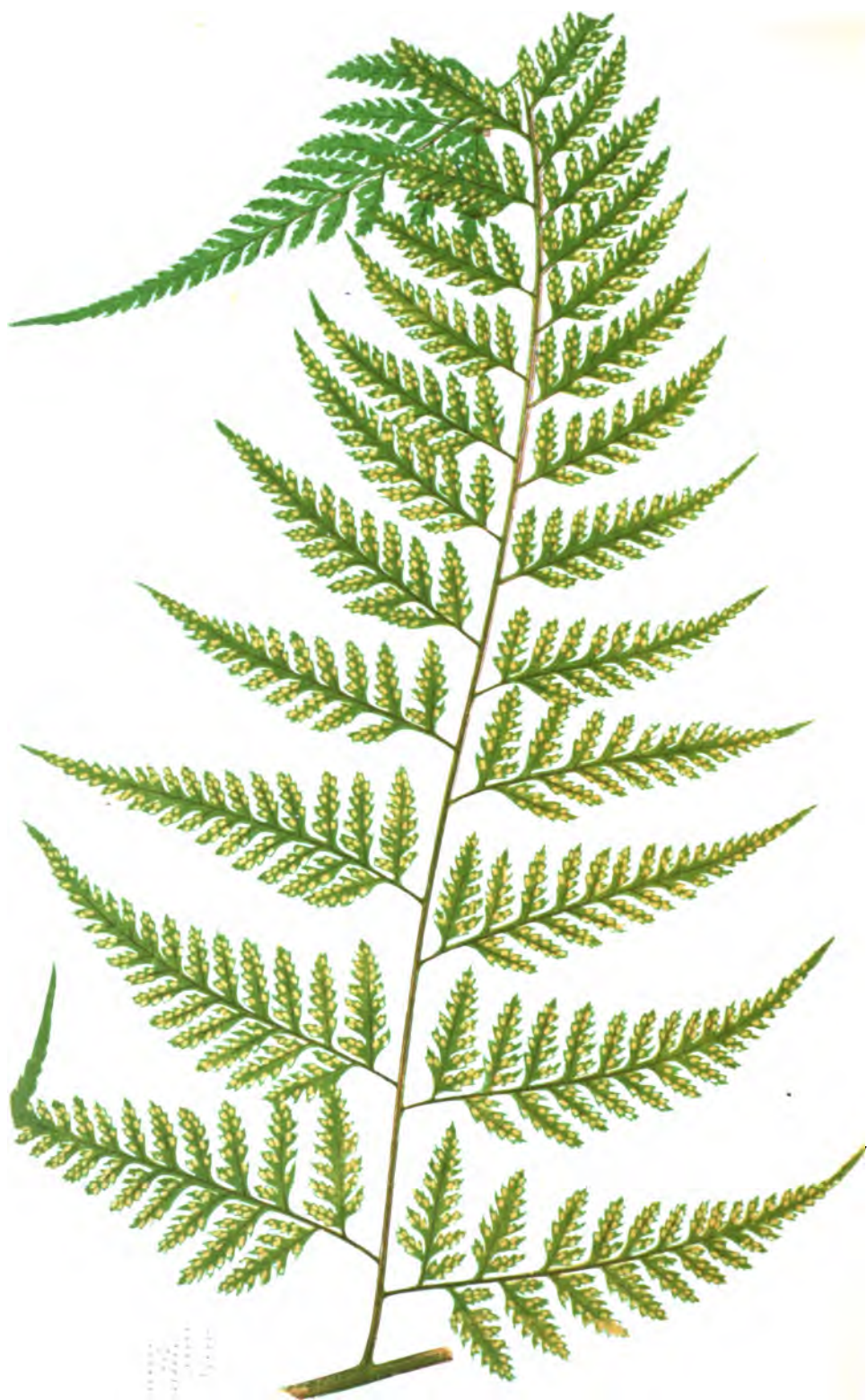
Involucres half cup-shaped, sunk within the lobe, compressed, truncate at the mouth.

My thanks are due to Mr. David Moore, of the Glasnevin Botanic Gardens, Dublin, for a frond of this Fern.

It may be procured of Mr. R. Sim, of Foot's Cray, Kent.

The illustration is from Mr. D. Moore's frond.





DAVALLIA POLYANTHA.—J. S. S. A.







Portion of pinna of fertile Frond— under side.

## DAVALLIA POLYANTHA.

HOOKE. MOORE.

PLATE XXIII. VOL. VIII.

*Microlepia polyantha*,  
*Davallia divaricata*,

FEE.  
BLUME. J. SMITH. PRESL.  
(Not of HOOKE, SCHLECHTENDAL,  
or LINK.)

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Polyantha*—Many-flowered.

THIS beautiful exhibition plant should be in every collection. The fronds being exceedingly handsome, the fertile and sterile ones so different, the shades of green, and in younger fronds the tints of pink and red so various, and the plant itself so readily grown, that it is a universal favourite.

An evergreen stove Fern.

Native of the Malayan Archipelago and Singapore.

Introduced from Java in 1847, by Messrs. Rollißon, of Tooting.

The fronds, which are glabrous, are triangularly-elongate in shape, triquadripinnate, the pinnæ as well as the pinnules

VOL. VIII.

M



tri-angularly elongate-acuminate, sub-opposite or opposite, and profoundly pinnatifid; segments small, oblong-linear; apex blunt, base decurrent, margin crenate. Fertile frond contracted. Widest pinnæ twelve inches in length.

Fronds lateral.

Rhizoma thick, creeping, and covered with soft reddish brown scales.

Veins forked.

Sori intramarginal, vertically oblong, and being swollen above the surface of the frond, give the plant a pleasing appearance.

Length of frond from thirty-five to seventy inches; colour when young purplish red, then greenish red, and lastly a rich shining deep green. On a plant with many fronds the diversity of colour is very striking.

Stipes and rachis smooth, twenty-four inches in length, bright red, except two very narrow green lateral lines on each side of the stem.

I am indebted to Messrs. Rollisson, of Tooting, for a plant of this very beautiful Fern.

It may be procured of Messrs. Rollisson, of Tooting; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; and Cooling, of Derby.

The illustration is from a plant in my own collection.



Pinna of barren Frond.











Entire pinna from near the apex of a Frond.

## DAVALLIA ORNATA.

WALLICH. LINK. MOORE.

PLATE XXIV. VOL. VIII.

*Davallia solida*, var. *latifolia*,  
*Stenolobus ornatus*,

HOOKEE.  
PRESL.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Ornata*—Adorned.

THERE are many forms of this Fern, if we connect it with *Davallia solida*. The broad-fronded variety is so distinct, and although other varieties, less broad, run this Fern into *D. solida*, still I have ventured to keep them separate. It is a noble species.

An evergreen stove Fern.

Native of Singapore and Borneo.

Introduced into the Royal Gardens, Kew, in 1844, by Mr. H. Lowe.

Fronds glabrous, deltoid, and bipinnate; the pinnæ triangularly elongate, and having very broad pinnules, which are coriaceous, oblong-ovate, the fertile ones distant and profoundly

pinnatifid, superior confluent, base wedge-shaped, margin serrate.

Veins forked.

Fronds lateral.

Rhizoma scandent, stout, and clothed with woolly scales.

Length of frond eighteen to twenty inches; colour bright shining green.

My thanks are due to Messrs. Rollisson, of Tooting, for a plant of this Fern; and to Mr. Joseph Henderson, of Wentworth, and Mr. G. Norman, of Hull, for fronds.

It may be procured of Messrs. Rollisson, of Tooting; Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Veitch, of Chelsea; Jackson, of Kingston; and Booth, of Hamburg.

The illustration is from a plant in my own collection.

44





NU

DAVALLIA PEDATA.  
XXV—VOL. 8.







Mature Frond—under side.

# DAVALLIA PEDATA.

SWARTZ. HOOKER. J. SMITH. WALLICH. PRESL.

PLATE XXV. VOL. VIII.

<i>Davallia cordifolia</i> ,	REINWARDT.
" <i>subimbricata</i> ,	BLUME.
<i>Humata pedata</i> ,	J. SMITH.
<i>Adiantum repens</i> ,	LINNÆUS.
" <i>repens</i> , var. <i>minor</i> ,	NEES AND BLUME.
<i>Pachypleuria pedata</i> ,	PRESL.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Pedata*—Footed.

A DWARF species, very distinct.

An evergreen stove Fern.

Native of the East Indies, Mauritius, Marianne Isles,  
 Bourbon, Ceylon, Java, and Malay Archipelago.

Fronds palcaceous, stipitate, very coriaceous, deltoideo-cordate in form, somewhat five-angled, and tripartito-pinnatifid; segments oblong-obtuse, the fertile segments being crenato-dentate.

Sori submarginal.

Stipes elongated, chaffy below.

Caudex creeping.

Length of frond from two to six inches.

My thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew, for fronds of this species.

It is not in any of the Nurserymen's Catalogues.

The illustration is from Mr. Smith's frond.





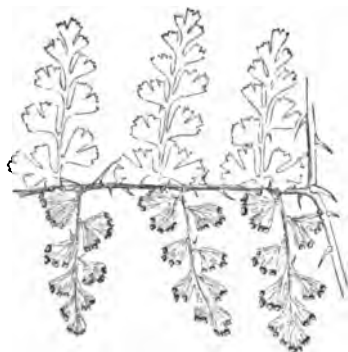
Fig. 1007

DAVALLIA ACULEATA.—ALLEN OF FROND, Digitized by Google  
XXVI—VOL. 8.









Portion of fertile Pinna—under side.

## DAVALLIA ACULEATA.

J. SMITH. HOOKER. SWARTZ. WILLDENOW.  
PRESL. SPRENGEL. SLOANE. (*Not of* HEDWIG.)

PLATE XXVI. VOL. VIII.

<i>Adiantum aculeatum</i> ,	LINNÆUS. PLUMIER. SPRENGEL.
" <i>frutescens</i> ,	PLUMIER.
<i>Odontosoria aculeata</i> ,	J. SMITH.
<i>Davallia dumosa</i> ,	SWARTZ. WILLDENOW. ( <i>Not of</i>
	KUNZE, <i>nor</i> PÆFFIG.)
<i>Stenoloma aculeatum</i> ,	FEE.
" <i>dumosum</i> ,	FEE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Aculeata*—Prickly.

IN THE SECTION STENOLOMA OF AUTHORS.

A VERY distinct, scandent *Davallia*, somewhat in the character of *Platyloma flexuosa* in its habit, and of an *Adiantum* in its

pinnules, the stem bearing thorns. Rare in cultivation.

An evergreen stove Fern.

Native of the West Indies, Hispaniola, Jamaica, Dominica, where it has been found by Plumier, Menzies, Swartz, Dr. Bancroft, and Dr. Imray.

Fronds very long, scandent and spinous, sub-triplicato-pinnate, subcoriaceous, lower pinnæ tripinnate, ultimate pinnæ lanceolate, pinnules somewhat cuneate.

Rachis wiry, flexuous or zigzag, prickly, with spines curved downwards.

Sori small and cup-shaped.

Caudex thin, branched, woody, black and woolly.

Rachis and stipes ebeneous.

The habit of the plant closely resembles a bramble, covering whole fields, and investing the largest forest trees if growing near them.

For fronds my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

It may be procured of Mr. Sim, of Foot's Cray.

The illustration is from Sir W. J. Hooker's frond.





111  
 112  
 113  
 114  
 115  
 116  
 117  
 118  
 119  
 120  
 121  
 122  
 123  
 124  
 125  
 126  
 127  
 128  
 129  
 130  
 131  
 132  
 133  
 134  
 135  
 136  
 137  
 138  
 139  
 140  
 141  
 142  
 143  
 144  
 145  
 146  
 147  
 148  
 149  
 150  
 151  
 152  
 153  
 154  
 155  
 156  
 157  
 158  
 159  
 160  
 161  
 162  
 163  
 164  
 165  
 166  
 167  
 168  
 169  
 170  
 171  
 172  
 173  
 174  
 175  
 176  
 177  
 178  
 179  
 180  
 181  
 182  
 183  
 184  
 185  
 186  
 187  
 188  
 189  
 190  
 191  
 192  
 193  
 194  
 195  
 196  
 197  
 198  
 199  
 200  
 201  
 202  
 203  
 204  
 205  
 206  
 207  
 208  
 209  
 210  
 211  
 212  
 213  
 214  
 215  
 216  
 217  
 218  
 219  
 220  
 221  
 222  
 223  
 224  
 225  
 226  
 227  
 228  
 229  
 230  
 231  
 232  
 233  
 234  
 235  
 236  
 237  
 238  
 239  
 240  
 241  
 242  
 243  
 244  
 245  
 246  
 247  
 248  
 249  
 250  
 251  
 252  
 253  
 254  
 255  
 256  
 257  
 258  
 259  
 260  
 261  
 262  
 263  
 264  
 265  
 266  
 267  
 268  
 269  
 270  
 271  
 272  
 273  
 274  
 275  
 276  
 277  
 278  
 279  
 280  
 281  
 282  
 283  
 284  
 285  
 286  
 287  
 288  
 289  
 290  
 291  
 292  
 293  
 294  
 295  
 296  
 297  
 298  
 299  
 300  
 301  
 302  
 303  
 304  
 305  
 306  
 307  
 308  
 309  
 310  
 311  
 312  
 313  
 314  
 315  
 316  
 317  
 318  
 319  
 320  
 321  
 322  
 323  
 324  
 325  
 326  
 327  
 328  
 329  
 330  
 331  
 332  
 333  
 334  
 335  
 336  
 337  
 338  
 339  
 340  
 341  
 342  
 343  
 344  
 345  
 346  
 347  
 348  
 349  
 350  
 351  
 352  
 353  
 354  
 355  
 356  
 357  
 358  
 359  
 360  
 361  
 362  
 363  
 364  
 365  
 366  
 367  
 368  
 369  
 370  
 371  
 372  
 373  
 374  
 375  
 376  
 377  
 378  
 379  
 380  
 381  
 382  
 383  
 384  
 385  
 386  
 387  
 388  
 389  
 390  
 391  
 392  
 393  
 394  
 395  
 396  
 397  
 398  
 399  
 400  
 401  
 402  
 403  
 404  
 405  
 406  
 407  
 408  
 409  
 410  
 411  
 412  
 413  
 414  
 415  
 416  
 417  
 418  
 419  
 420  
 421  
 422  
 423  
 424  
 425  
 426  
 427  
 428  
 429  
 430  
 431  
 432  
 433  
 434  
 435  
 436  
 437  
 438  
 439  
 440  
 441  
 442  
 443  
 444  
 445  
 446  
 447  
 448  
 449  
 450  
 451  
 452  
 453  
 454  
 455  
 456  
 457  
 458  
 459  
 460  
 461  
 462  
 463  
 464  
 465  
 466  
 467  
 468  
 469  
 470  
 471  
 472  
 473  
 474  
 475  
 476  
 477  
 478  
 479  
 480  
 481  
 482  
 483  
 484  
 485  
 486  
 487  
 488  
 489  
 490  
 491  
 492  
 493  
 494  
 495  
 496  
 497  
 498  
 499  
 500  
 501  
 502  
 503  
 504  
 505  
 506  
 507  
 508  
 509  
 510  
 511  
 512  
 513  
 514  
 515  
 516  
 517  
 518  
 519  
 520  
 521  
 522  
 523  
 524  
 525  
 526  
 527  
 528  
 529  
 530  
 531  
 532  
 533  
 534  
 535  
 536  
 537  
 538  
 539  
 540  
 541  
 542  
 543  
 544  
 545  
 546  
 547  
 548  
 549  
 550  
 551  
 552  
 553  
 554  
 555  
 556  
 557  
 558  
 559  
 560  
 561  
 562  
 563  
 564  
 565  
 566  
 567  
 568  
 569  
 570  
 571  
 572  
 573  
 574  
 575  
 576  
 577  
 578  
 579  
 580  
 581  
 582  
 583  
 584  
 585  
 586  
 587  
 588  
 589  
 590  
 591  
 592  
 593  
 594  
 595  
 596  
 597  
 598  
 599  
 600  
 601  
 602  
 603  
 604  
 605  
 606  
 607  
 608  
 609  
 610  
 611  
 612  
 613  
 614  
 615  
 616  
 617  
 618  
 619  
 620  
 621  
 622  
 623  
 624  
 625  
 626  
 627  
 628  
 629  
 630  
 631  
 632  
 633  
 634  
 635  
 636  
 637  
 638  
 639  
 640  
 641  
 642  
 643  
 644  
 645  
 646  
 647  
 648  
 649  
 650  
 651  
 652  
 653  
 654  
 655  
 656  
 657  
 658  
 659  
 660  
 661  
 662  
 663  
 664  
 665  
 666  
 667  
 668  
 669  
 670  
 671  
 672  
 673  
 674  
 675  
 676  
 677  
 678  
 679  
 680  
 681  
 682  
 683  
 684  
 685  
 686  
 687  
 688  
 689  
 690  
 691  
 692  
 693  
 694  
 695  
 696  
 697  
 698  
 699  
 700  
 701  
 702  
 703  
 704  
 705  
 706  
 707  
 708  
 709  
 710  
 711  
 712  
 713  
 714  
 715  
 716  
 717  
 718  
 719  
 720  
 721  
 722  
 723  
 724  
 725  
 726  
 727  
 728  
 729  
 730  
 731  
 732  
 733  
 734  
 735  
 736  
 737  
 738  
 739  
 740  
 741  
 742  
 743  
 744  
 745  
 746  
 747  
 748  
 749  
 750  
 751  
 752  
 753  
 754  
 755  
 756  
 757  
 758  
 759  
 760  
 761  
 762  
 763  
 764  
 765  
 766  
 767  
 768  
 769  
 770  
 771  
 772  
 773  
 774  
 775  
 776  
 777  
 778  
 779  
 780  
 781  
 782  
 783  
 784  
 785  
 786  
 787  
 788  
 789  
 790  
 791  
 792  
 793  
 794  
 795  
 796  
 797  
 798  
 799  
 800  
 801  
 802  
 803  
 804  
 805  
 806  
 807  
 808  
 809  
 810  
 811  
 812  
 813  
 814  
 815  
 816  
 817  
 818  
 819  
 820  
 821  
 822  
 823  
 824  
 825  
 826  
 827  
 828  
 829  
 830  
 831  
 832  
 833  
 834  
 835  
 836  
 837  
 838  
 839  
 840  
 841  
 842  
 843  
 844  
 845  
 846  
 847  
 848  
 849  
 850  
 851  
 852  
 853  
 854  
 855  
 856  
 857  
 858  
 859  
 860  
 861  
 862  
 863  
 864  
 865  
 866  
 867  
 868  
 869  
 870  
 871  
 872  
 873  
 874  
 875  
 876  
 877  
 878  
 879  
 880  
 881  
 882  
 883  
 884  
 885  
 886  
 887  
 888  
 889  
 890  
 891  
 892  
 893  
 894  
 895  
 896  
 897  
 898  
 899  
 900  
 901  
 902  
 903  
 904  
 905  
 906  
 907  
 908  
 909  
 910  
 911  
 912  
 913  
 914  
 915  
 916  
 917  
 918  
 919  
 920  
 921  
 922  
 923  
 924  
 925  
 926  
 927  
 928  
 929  
 930  
 931  
 932  
 933  
 934  
 935  
 936  
 937  
 938  
 939  
 940  
 941  
 942  
 943  
 944  
 945  
 946  
 947  
 948  
 949  
 950  
 951  
 952  
 953  
 954  
 955  
 956  
 957  
 958  
 959  
 960  
 961  
 962  
 963  
 964  
 965  
 966  
 967  
 968  
 969  
 970  
 971  
 972  
 973  
 974  
 975  
 976  
 977  
 978  
 979  
 980  
 981  
 982  
 983  
 984  
 985  
 986  
 987  
 988  
 989  
 990  
 991  
 992  
 993  
 994  
 995  
 996  
 997  
 998  
 999  
 1000  
 1001  
 1002  
 1003  
 1004  
 1005  
 1006  
 1007  
 1008  
 1009  
 1010  
 1011  
 1012  
 1013  
 1014  
 1015  
 1016  
 1017  
 1018  
 1019  
 1020  
 1021  
 1022  
 1023  
 1024  
 1025  
 1026  
 1027  
 1028  
 1029  
 1030  
 1031  
 1032  
 1033  
 1034  
 1035  
 1036  
 1037  
 1038  
 1039  
 1040  
 1041  
 1042  
 1043  
 1044  
 1045  
 1046  
 1047  
 1048  
 1049  
 1050  
 1051  
 1052  
 1053  
 1054  
 1055  
 1056  
 1057  
 1058  
 1059  
 1060  
 1061  
 1062  
 1063  
 1064  
 1065  
 1066  
 1067  
 1068  
 1069  
 1070  
 1071  
 1072  
 1073  
 1074  
 1075  
 1076  
 1077  
 1078  
 1079  
 1080  
 1081  
 1082  
 1083  
 1084  
 1085  
 1086  
 1087  
 1088  
 1089  
 1090  
 1091  
 1092  
 1093  
 1094  
 1095  
 1096  
 1097  
 1098  
 1099  
 1100  
 1101  
 1102  
 1103  
 1104  
 1105  
 1106  
 1107  
 1108  
 1109  
 1110  
 1111  
 1112  
 1113  
 1114  
 1115  
 1116  
 1117  
 1118  
 1119  
 1120  
 1121  
 1122  
 1123  
 1124  
 1125  
 1126  
 1127  
 1128  
 1129  
 1130  
 1131  
 1132  
 1133  
 1134  
 1135  
 1136  
 1137  
 1138  
 1139  
 1140  
 1141  
 1142  
 1143  
 1144  
 1145  
 1146  
 1147  
 1148  
 1149  
 1150  
 1151  
 1152  
 1153  
 1154  
 1155  
 1156  
 1157  
 1158  
 1159  
 1160  
 1161  
 1162  
 1163  
 1164  
 1165  
 1166  
 1167  
 1168  
 1169  
 1170  
 1171  
 1172  
 1173  
 1174  
 1175  
 1176  
 1177  
 1178  
 1179  
 1180  
 1181  
 1182  
 1183  
 1184  
 1185  
 1186  
 1187  
 1188  
 1189  
 1190  
 1191  
 1192  
 1193  
 1194  
 1195  
 1196  
 1197  
 1198  
 1199  
 1200  
 1201  
 1202  
 1203  
 1204  
 1205  
 1206  
 1207  
 1208  
 1209  
 1210  
 1211  
 1212  
 1213  
 1214  
 1215  
 1216  
 1217  
 1218  
 1219  
 1220  
 1221  
 1222  
 1223  
 1224  
 1225  
 1226  
 1227  
 1228  
 1229  
 1230  
 1231  
 1232  
 1233  
 1234  
 1235  
 1236  
 1237  
 1238  
 1239  
 1240  
 1241  
 1242  
 1243  
 1244  
 1245  
 1246  
 1247  
 1248  
 1249  
 1250  
 1251  
 1252  
 1253  
 1254  
 1255  
 1256  
 1257  
 1258  
 1259  
 1260  
 1261  
 1262  
 1263  
 1264  
 1265  
 1266  
 1267  
 1268  
 1269  
 1270  
 1271  
 1272  
 1273  
 1274  
 1275  
 1276  
 1277  
 1278  
 1279  
 1280  
 1281  
 1282  
 1283  
 1284  
 1285  
 1286  
 1287  
 1288  
 1289  
 1290  
 1291  
 1292  
 1293  
 1294  
 1295  
 1296  
 1297  
 1298  
 1299  
 1300  
 1301  
 1302  
 1303  
 1304  
 1305  
 1306  
 1307  
 1308  
 1309  
 1310  
 1311  
 1312  
 1313  
 1314  
 1315  
 1316  
 1317  
 1318  
 1319  
 1320  
 1321  
 1322  
 1323  
 1324  
 1325  
 1326  
 1327  
 1328  
 1329  
 1330  
 1331  
 1332  
 1333  
 1334  
 1335  
 1336  
 1337  
 1338  
 1339  
 1340  
 1341  
 1342  
 1343  
 1344  
 1345  
 1346  
 1347  
 1348  
 1349  
 1350  
 1351  
 1352  
 1353  
 1354  
 1355  
 1356  
 1357  
 1358  
 1359  
 1360  
 1361  
 1362  
 1363  
 1364  
 1365  
 1366  
 1367  
 1368  
 1369  
 1370  
 1371  
 1372  
 1373  
 1374  
 1375  
 1376  
 1377  
 1378  
 1379  
 1380  
 1381  
 1382  
 1383  
 1384  
 1385  
 1386  
 1387  
 1388  
 1389  
 1390  
 1391  
 1392  
 1393  
 1394  
 1395  
 1396  
 1397  
 1398  
 1399  
 1400  
 1401  
 1402  
 1403  
 1404  
 1405  
 1406  
 1407  
 1408  
 1409  
 1410  
 1411  
 1412  
 1413  
 1414  
 1415  
 1416  
 1417  
 1418  
 1419  
 1420  
 1421  
 1422  
 1423  
 1424  
 1425  
 1426  
 1427  
 1428  
 1429  
 1430  
 1431  
 1432  
 1433  
 1434  
 1435  
 1436  
 1437  
 1438  
 1439  
 1440  
 1441  
 1442  
 1443  
 1444  
 1445  
 1446  
 1447  
 1448  
 1449  
 1450  
 1451  
 1452  
 1453  
 1454  
 1455  
 1456  
 1457  
 1458  
 1459  
 1460  
 1461  
 1462  
 1463  
 1464  
 1465  
 1466  
 1467  
 1468  
 1469  
 1470  
 1471  
 1472  
 1473  
 1474  
 1475  
 1476  
 1477  
 1478  
 1479  
 1480  
 1481  
 1482  
 1483  
 1484  
 1485  
 1486  
 1487  
 1488  
 1489  
 1490  
 1491  
 1492  
 1493  
 1494  
 1495  
 1496  
 1497  
 1498  
 1499  
 1500  
 1501  
 1502  
 1503  
 1504  
 1505  
 1506  
 1507  
 1508  
 1509  
 1510  
 1511  
 1512  
 1513  
 1514  
 1515  
 1516  
 1517  
 1518  
 1519  
 1520  
 1521  
 1522  
 1523  
 1524  
 1525  
 1526  
 1527  
 1528  
 1529  
 1530  
 1531  
 1532  
 1533  
 1534  
 1535  
 1536  
 1537  
 1538  
 1539  
 1540  
 1541  
 1542  
 1543  
 1544  
 1545  
 1546  
 1547  
 1548  
 1549  
 1550  
 1551  
 1552  
 1553  
 1554  
 1555  
 1556  
 1557  
 1558  
 1559  
 1560  
 1561  
 1562  
 1563  
 1564  
 1565  
 1566  
 1567  
 1568  
 1569







Portion of pinna of fertile Frond—under side.

## DAVALLIA SOLIDA.

SWARTZ. SCHKUHR. HOOKER. J. SMITH.  
 WILDENOW. BLUME. KUNZE. MOORE. SPRENGEL.  
 HEDWIG. FEE. MOORE AND HOULSTON.  
 (*Not of* HOOKER AND ARNOTT.)

PLATE XXVII. VOL. VIII.

<i>Davallia procera,</i>	HEDWIG.
“ <i>caudata,</i>	WALLICH.
“ <i>sordida,</i>	OF GARDENS.
“ <i>elegans,</i>	KUNZE.
<i>Trichomanes solidum,</i>	FORSTER.
<i>Stenolobus solidus,</i>	PRESL.
“ <i>Kunzeanus,</i>	PRESL.
<i>Humata solida,</i>	DESVAUX.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Solida*—Solid.

A PRETTY species, making a nice exhibition plant.  
 An evergreen stove Fern.  
 Native of the East Indies, Malay, and the Polynesian Islands,  
 Otaheite, Pitcairn's Island, Malden Island, Singapore, and Java.  
 Introduced into the Royal Gardens, Kew, by Mr. H. Lowe,  
 in 1844.

VOL. VIII.

N



Fronds glabrous, deltoid, bi-tripinnate, pinnules oblong, acute, profoundly pinnatifid, largest next the rachis on the upper side, inferior pinnules cuneate at the base, superior ones confluent, with the margin inciso-serrate.

Fronds lateral.

Rhizoma scandent, frutescent, and thickly covered with lengthy narrow brown woolly scales.

Length of frond twelve to eighteen inches; colour dark green.

My obligations are due to Mr. Thomas Moore, of the Chelsea Botanic Gardens, for a plant of this Fern, and to Mr. J. Smith, of the Royal Gardens, Kew, for fronds.

It may be procured of Messrs. Sim, of Foot's Cray; Rollisson, of Tooting; Veitch, of Chelsea; and E. G. Henderson, of St. John's Wood.

The illustration is from Mr. Smith's frond.





Adiantum  
Bullatum  
L.

ADANTUM BULLATUM.  
L. VALL. C. 1.







Barren Pinna.

## DAVALLIA BULLATA.

WALLICH. HOOKER. J. SMITH. FEE.

PLATE XXVIII. VOL. VIII.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.

*Bullata*—From the numerous swellings.

ANOTHER interesting small species, but little known in our English collections, except the more extensive ones.

A deciduous stove Fern.

Native of the East Indies, Nepal, and Assam.

For this species we are indebted to Dr. Wallich.

Fronds deltoideo-ovate, sub-membranaceous, shining, tripinnate, the fertile ones copiously bullate on the upper side. The lower primary pinnæ sub-opposite, ovate-acuminate, pinnules profoundly pinnatifid, and lanceolate.

Caudex creeping, and clothed with copious sub-squamose ferruginous scales.

Length of frond six inches, width from four to six inches.

Habit erect; stem slender.

For a plant my thanks are due to Messrs. Parker, of Holloway; and for fronds to Mr. Henderson, of Wentworth.

The illustration is from a plant in my own collection.









100







Portion of fertile pinna—under side.

# DAVALLIA TRICHOSTICHA.

HOOKEr. KUNZE. CUMING.

PLATE XXIX. VOL. VIII.

*Microlepia trichosticha*,  
*Selenidium divergens*,

J. SMITH. FEE.  
KUNZE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.

*Trichosticha*—Hairy-spiked.

IN THE SECTION MICROLEPIA OF AUTHORS.

AN uncommon Fern, easily grown, and well worthy of extended cultivation.

An evergreen stove species.

Native of Java, Philippines, and Isle of Samar.

Fronds large, sub-membranaceous, bi-tripinnate, the primary

pinnæ being twelve inches in length, rachis winged above, ultimate pinna and pinnules sessile, base almost cuneate. Somewhat hairy above, and densely pubescent below, the pubescence being very conspicuous and colourless.

Sori small, and somewhat distant from the margin.

Length of frond three feet; colour pale green.

My thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew, for a plant of this species; and to Mr. J. Smith, Curator of the Royal Gardens, Kew, for fronds.

It does not appear in any of the Nurserymen's Catalogues.

The illustration is from a plant in my own collection.













Fertile pinna—under side.

# DAVALLIA LONCHITIDEA.

WALLICH. HOOKER.

PLATE XXX. VOL. VIII.

*Davallia platyphylla*,  
*Microlepia* "  
 " *lonchitidea*,

DON.  
 J. SMITH.  
 J. SMITH.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Lonchitidea*—Spear-shaped.

IN THE SECTION MICROLEPIA OF AUTHORS.

A BEAUTIFUL stove species, one of the noblest of the genus, making an exceedingly handsome specimen, having very spreading and nearly horizontal fronds, above a foot in width.

Native of Nepal, Madras, and the Island of Ceylon.

Fronds large, tall, and tripinnate, the primary and secondary pinnules much petiolated—the petioles long and glossy. Coriaceous-membranaceous, glabrous. The pinnæ large and spreading,

ovate lanceolate in form, deeply pinnatifid, and often pinnate at the base; apices much acuminate. Pinnules very broad.

Veins pinnate.

Sori solitary, mostly in the axils of the teeth near the margin, very conspicuous.

Rachis and costa flexuose.

Caudex thick and creeping. Habit erect.

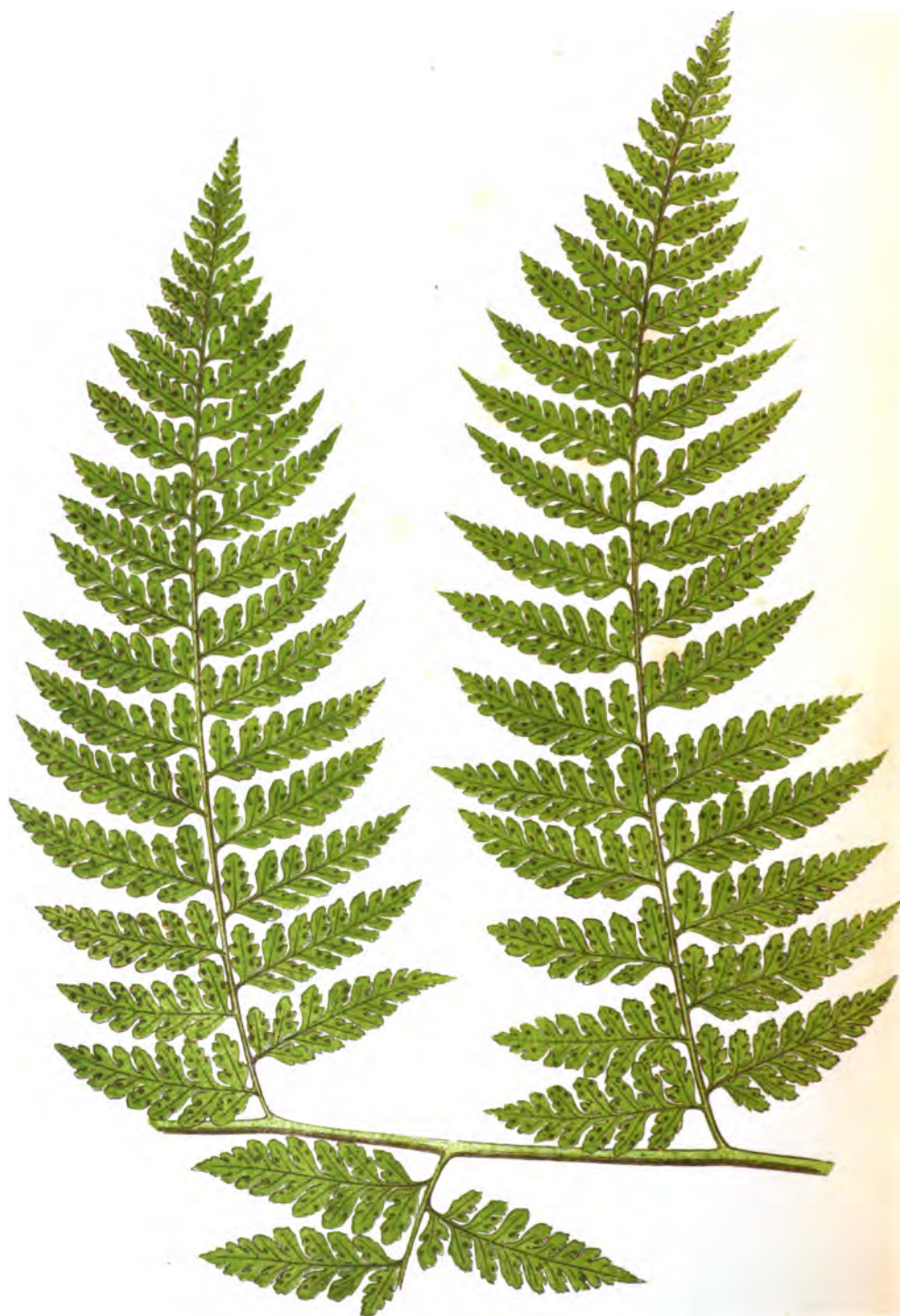
Length of frond fifty inches; colour pale green.

For fronds my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew.

It may be procured of Mr. R. Sim, Nurseryman, of Foot's Cray, Kent.

The illustration is from Mr. Smith's frond.





10







Portion of pinna of fertile Frond—under side.

## DAVALLIA POLYPODIOIDES.

DON. HOOKER.

PLATE XXXI. VOL. VIII.

<i>Davallia rhomboidea</i> ,	WALLICH.
“ <i>flaccida</i> ,	R. BROWN. BLUME. DON.
	(Not of HOOKER & ARNOTT.)
“ <i>divergens</i> ,	SCHOTT.
“ <i>Nepalensis</i> ,	SPRENGEL?
<i>Microlepia polypodioides</i> ,	PRESL. HOOKER.
“ <i>flaccida</i> ,	J. SMITH. (Not of FRE.)
“ <i>rhomboidea</i> ,	PRESL. J. SMITH. FRE.
<i>Polypodium nudum</i> ,	FORSTER.
“ <i>Speluncæ</i> ,	LINNÆUS.
“ <i>cristatum</i> ,	HOUTTUYN.
<i>Cænopteris Japonica</i> ,	WILLDENOW.
<i>Dicksonia polypodioides</i> ,	SWARTZ. WILLDENOW.
“ <i>flaccida</i> ,	HOOKER AND ARNOTT. BROWN.
	(Not of SWARTZ & SCHUHR.)
“ <i>virens</i> ,	WALLICH.
“ <i>Roxburghii</i> ,	WALLICH.
“ <i>puberula</i> ,	WALLICH.
“ <i>rhomboidea</i> ,	WALLICH.
“ <i>pyramidata</i> ,	WALLICH.
“ <i>pilosula</i> ,	WALLICH.

VOL. VIII.

O



*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Polypodioides*—Polypodium-like.

#### IN THE SECTION MICROLEPIA OF AUTHORS.

AN ornamental large Fern.

An evergreen stove species.

Native of Asia, Ceylon, East Indies, Madras, Assam, Nepal, Singapore, Java, China, Brazil, Oahu, New Holland, Tova, Luzon, Khasiya, Polynesia, Fernando Po, Penang, and Amboyna.

We are indebted to Mr. G. Norman, of Hull, for introducing this species, he having received it from the continent.

Fronds ample, triangularly-elongate, tripinnate, and flaccid; pinnules oblong-acuminate, segments membranous, roundish, and deeply pinnatifid; base decurrent, margin bluntly crenate; primary pinnæ distant.

Fronds lateral, very hirsute, especially on the veins and costa, beneath.

Rhizoma creeping.

Length of frond thirty-five to fifty inches; colour a grass green.

Sori large, mostly solitary on the entire lobes, and having several on the pinnatifid ones.

Sir W. J. Hooker describes four varieties, namely,—

*Subglabra*.—Fronds nearly glabrous.

*Pubescens*.—Fronds pubescent, with close short down.

*Hispida*.—Fronds hairy.

*Rhomboidea*.—A much larger Fern. It is the *Davallia rhomboidea* of Wallich, and *Microlepia rhomboidea* of Presl.

Introduced into England in 1826.

For plants of this species, and the variety *Rhomboidea*, I am indebted to Messrs. Rollisson, of Tooting, and Mr. R. Sim, of Foot's Cray; and for fronds to Mr. R. Sim.

It may be procured from Messrs. Rollisson, of Tooting; Sim, of Foot's Cray; and Veitch, of Chelsea.

The illustrations are from Mr. Sim's fronds.—An engraving of a pinna of a Variety is given at page 92.





100







Pinna of sterile Frond—under side.

## DAVALLIA KHASIYANA.

HOOKER.

PLATE XXXII. VOL. VIII.

*Microlepia cristata*,  
 “ *Khasiyana*,  
 “ *Khasiyana*,

J. SMITH.  
 FEE.  
 MOORE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.  
*Khasiyana*—Named after the Khasiya hills, in Northern India, where it is found.

### IN THE SECTION MICROLEPIA OF AUTHORS.

A PRETTY, rare species.

An evergreen stove Fern.

Native of India, Java, Ceylon, and Luzon.

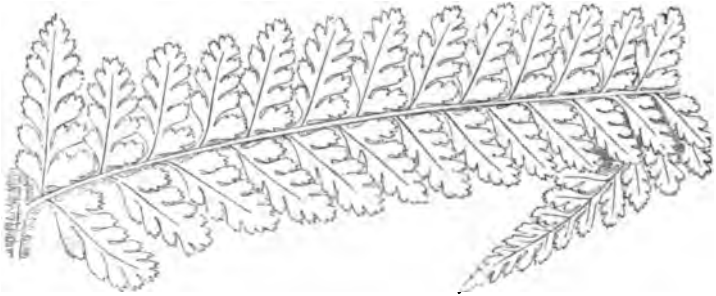
The fronds are very tall, and lanceolate in form, bipinnate, with an elongated stipes thirty inches in length; the rachis and veins pubescent. Pinnæ petiolate, and lanceolate-acuminate in shape. Pinnules subdimidiato-ovate, obtuse, pinnatifid, and angulato-dentate. Pinnæ six to eight inches long.

Length of frond thirty-six inches.

Involucres small and membranaceous.

There is a variety more glabrous, the pinnules not so profoundly pinnatifid, and less petiolate; it is found in the Isle of Ronin.

For fronds my thanks are due to Mr R. Sim, of Foot's Cray. It is in the Catalogue of Messrs. Sim, of Foot's Cray. The illustration is from a frond sent by Mr. Sim.



*Davallia polypodioides*.—Variety.







1000  
1001  
1002  
1003  
1004  
1005  
1006  
1007  
1008  
1009  
1010  
1011  
1012  
1013  
1014  
1015  
1016  
1017  
1018  
1019  
1020  
1021  
1022  
1023  
1024  
1025  
1026  
1027  
1028  
1029  
1030  
1031  
1032  
1033  
1034  
1035  
1036  
1037  
1038  
1039  
1040  
1041  
1042  
1043  
1044  
1045  
1046  
1047  
1048  
1049  
1050  
1051  
1052  
1053  
1054  
1055  
1056  
1057  
1058  
1059  
1060  
1061  
1062  
1063  
1064  
1065  
1066  
1067  
1068  
1069  
1070  
1071  
1072  
1073  
1074  
1075  
1076  
1077  
1078  
1079  
1080  
1081  
1082  
1083  
1084  
1085  
1086  
1087  
1088  
1089  
1090  
1091  
1092  
1093  
1094  
1095  
1096  
1097  
1098  
1099  
1100  
1101  
1102  
1103  
1104  
1105  
1106  
1107  
1108  
1109  
1110  
1111  
1112  
1113  
1114  
1115  
1116  
1117  
1118  
1119  
1120  
1121  
1122  
1123  
1124  
1125  
1126  
1127  
1128  
1129  
1130  
1131  
1132  
1133  
1134  
1135  
1136  
1137  
1138  
1139  
1140  
1141  
1142  
1143  
1144  
1145  
1146  
1147  
1148  
1149  
1150  
1151  
1152  
1153  
1154  
1155  
1156  
1157  
1158  
1159  
1160  
1161  
1162  
1163  
1164  
1165  
1166  
1167  
1168  
1169  
1170  
1171  
1172  
1173  
1174  
1175  
1176  
1177  
1178  
1179  
1180  
1181  
1182  
1183  
1184  
1185  
1186  
1187  
1188  
1189  
1190  
1191  
1192  
1193  
1194  
1195  
1196  
1197  
1198  
1199  
1200  
1201  
1202  
1203  
1204  
1205  
1206  
1207  
1208  
1209  
1210  
1211  
1212  
1213  
1214  
1215  
1216  
1217  
1218  
1219  
1220  
1221  
1222  
1223  
1224  
1225  
1226  
1227  
1228  
1229  
1230  
1231  
1232  
1233  
1234  
1235  
1236  
1237  
1238  
1239  
1240  
1241  
1242  
1243  
1244  
1245  
1246  
1247  
1248  
1249  
1250  
1251  
1252  
1253  
1254  
1255  
1256  
1257  
1258  
1259  
1260  
1261  
1262  
1263  
1264  
1265  
1266  
1267  
1268  
1269  
1270  
1271  
1272  
1273  
1274  
1275  
1276  
1277  
1278  
1279  
1280  
1281  
1282  
1283  
1284  
1285  
1286  
1287  
1288  
1289  
1290  
1291  
1292  
1293  
1294  
1295  
1296  
1297  
1298  
1299  
1300  
1301  
1302  
1303  
1304  
1305  
1306  
1307  
1308  
1309  
1310  
1311  
1312  
1313  
1314  
1315  
1316  
1317  
1318  
1319  
1320  
1321  
1322  
1323  
1324  
1325  
1326  
1327  
1328  
1329  
1330  
1331  
1332  
1333  
1334  
1335  
1336  
1337  
1338  
1339  
1340  
1341  
1342  
1343  
1344  
1345  
1346  
1347  
1348  
1349  
1350  
1351  
1352  
1353  
1354  
1355  
1356  
1357  
1358  
1359  
1360  
1361  
1362  
1363  
1364  
1365  
1366  
1367  
1368  
1369  
1370  
1371  
1372  
1373  
1374  
1375  
1376  
1377  
1378  
1379  
1380  
1381  
1382  
1383  
1384  
1385  
1386  
1387  
1388  
1389  
1390  
1391  
1392  
1393  
1394  
1395  
1396  
1397  
1398  
1399  
1400  
1401  
1402  
1403  
1404  
1405  
1406  
1407  
1408  
1409  
1410  
1411  
1412  
1413  
1414  
1415  
1416  
1417  
1418  
1419  
1420  
1421  
1422  
1423  
1424  
1425  
1426  
1427  
1428  
1429  
1430  
1431  
1432  
1433  
1434  
1435  
1436  
1437  
1438  
1439  
1440  
1441  
1442  
1443  
1444  
1445  
1446  
1447  
1448  
1449  
1450  
1451  
1452  
1453  
1454  
1455  
1456  
1457  
1458  
1459  
1460  
1461  
1462  
1463  
1464  
1465  
1466  
1467  
1468  
1469  
1470  
1471  
1472  
1473  
1474  
1475  
1476  
1477  
1478  
1479  
1480  
1481  
1482  
1483  
1484  
1485  
1486  
1487  
1488  
1489  
1490  
1491  
1492  
1493  
1494  
1495  
1496  
1497  
1498  
1499  
1500  
1501  
1502  
1503  
1504  
1505  
1506  
1507  
1508  
1509  
1510  
1511  
1512  
1513  
1514  
1515  
1516  
1517  
1518  
1519  
1520  
1521  
1522  
1523  
1524  
1525  
1526  
1527  
1528  
1529  
1530  
1531  
1532  
1533  
1534  
1535  
1536  
1537  
1538  
1539  
1540  
1541  
1542  
1543  
1544  
1545  
1546  
1547  
1548  
1549  
1550  
1551  
1552  
1553  
1554  
1555  
1556  
1557  
1558  
1559  
1560  
1561  
1562  
1563  
1564  
1565  
1566  
1567  
1568  
1569  
1570  
1571  
1572  
1573  
1574  
1575  
1576  
1577  
1578  
1579  
1580  
1581  
1582  
1583  
1584  
1585  
1586  
1587  
1588  
1589  
1590  
1591  
1592  
1593  
1594  
1595  
1596  
1597  
1598  
1599  
1600  
1601  
1602  
1603  
1604  
1605  
1606  
1607  
1608  
1609  
1610  
1611  
1612  
1613  
1614  
1615  
1616  
1617  
1618  
1619  
1620  
1621  
1622  
1623  
1624  
1625  
1626  
1627  
1628  
1629  
1630  
1631  
1632  
1633  
1634  
1635  
1636  
1637  
1638  
1639  
1640  
1641  
1642  
1643  
1644  
1645  
1646  
1647  
1648  
1649  
1650  
1651  
1652  
1653  
1654  
1655  
1656  
1657  
1658  
1659  
1660  
1661  
1662  
1663  
1664  
1665  
1666  
1667  
1668  
1669  
1670  
1671  
1672  
1673  
1674  
1675  
1676  
1677  
1678  
1679  
1680  
1681  
1682  
1683  
1684  
1685  
1686  
1687  
1688  
1689  
1690  
1691  
1692  
1693  
1694  
1695  
1696  
1697  
1698  
1699  
1700  
1701  
1702  
1703  
1704  
1705  
1706  
1707  
1708  
1709  
1710  
1711  
1712  
1713  
1714  
1715  
1716  
1717  
1718  
1719  
1720  
1721  
1722  
1723  
1724  
1725  
1726  
1727  
1728  
1729  
1730  
1731  
1732  
1733  
1734  
1735  
1736  
1737  
1738  
1739  
1740  
1741  
1742  
1743  
1744  
1745  
1746  
1747  
1748  
1749  
1750  
1751  
1752  
1753  
1754  
1755  
1756  
1757  
1758  
1759  
1760  
1761  
1762  
1763  
1764  
1765  
1766  
1767  
1768  
1769  
1770  
1771  
1772  
1773  
1774  
1775  
1776  
1777  
1778  
1779  
1780  
1781  
1782  
1783  
1784  
1785  
1786  
1787  
1788  
1789  
1790  
1791  
1792  
1793  
1794  
1795  
1796  
1797  
1798  
1799  
1800  
1801  
1802  
1803  
1804  
1805  
1806  
1807  
1808  
1809  
1810  
1811  
1812  
1813  
1814  
1815  
1816  
1817  
1818  
1819  
1820  
1821  
1822  
1823  
1824  
1825  
1826  
1827  
1828  
1829  
1830  
1831  
1832  
1833  
1834  
1835  
1836  
1837  
1838  
1839  
1840  
1841  
1842  
1843  
1844  
1845  
1846  
1847  
1848  
1849  
1850  
1851  
1852  
1853  
1854  
1855  
1856  
1857  
1858  
1859  
1860  
1861  
1862  
1863  
1864  
1865  
1866  
1867  
1868  
1869  
1870  
1871  
1872  
1873  
1874  
1875  
1876  
1877  
1878  
1879  
1880  
1881  
1882  
1883  
1884  
1885  
1886  
1887  
1888  
1889  
1890  
1891  
1892  
1893  
1894  
1895  
1896  
1897  
1898  
1899  
1900  
1901  
1902  
1903  
1904  
1905  
1906  
1907  
1908  
1909  
1910  
1911  
1912  
1913  
1914  
1915  
1916  
1917  
1918  
1919  
1920  
1921  
1922  
1923  
1924  
1925  
1926  
1927  
1928  
1929  
1930  
1931  
1932  
1933  
1934  
1935  
1936  
1937  
1938  
1939  
1940  
1941  
1942  
1943  
1944  
1945  
1946  
1947  
1948  
1949  
1950  
1951  
1952  
1953  
1954  
1955  
1956  
1957  
1958  
1959  
1960  
1961  
1962  
1963  
1964  
1965  
1966  
1967  
1968  
1969  
1970  
1971  
1972  
1973  
1974  
1975  
1976  
1977  
1978  
1979  
1980  
1981  
1982  
1983  
1984  
1985  
1986  
1987  
1988  
1989  
1990  
1991  
1992  
1993  
1994  
1995  
1996  
1997  
1998  
1999  
2000  
2001  
2002  
2003  
2004  
2005  
2006  
2007  
2008  
2009  
2010  
2011  
2012  
2013  
2014  
2015  
2016  
2017  
2018  
2019  
2020  
2021  
2022  
2023  
2024  
2025  
2026  
2027  
2028  
2029  
2030  
2031  
2032  
2033  
2034  
2035  
2036  
2037  
2038  
2039  
2040  
2041  
2042  
2043  
2044  
2045  
2046  
2047  
2048  
2049  
2050  
2051  
2052  
2053  
2054  
2055  
2056  
2057  
2058  
2059  
2060  
2061  
2062  
2063  
2064  
2065  
2066  
2067  
2068  
2069  
2070  
2071  
2072  
2073  
2074  
2075  
2076  
2077  
2078  
2079  
2080  
2081  
2082  
2083  
2084  
2085  
2086  
2087  
2088  
2089  
2090  
2091  
2092  
2093  
2094  
2095  
2096  
2097  
2098  
2099  
2100  
2101  
2102  
2103  
2104  
2105  
2106  
2107  
2108  
2109  
2110  
2111  
2112  
2113  
2114  
2115  
2116  
2117  
2118  
2119  
2120  
2121  
2122  
2123  
2124  
2125  
2126  
2127  
2128  
2129  
2130  
2131  
2132  
2133  
2134  
2135  
2136  
2137  
2138  
2139  
2140  
2141  
2142  
2143  
2144  
2145  
2146  
2147  
2148  
2149  
2150  
2151  
2152  
2153  
2154  
2155  
2156  
2157  
2158  
2159  
2160  
2161  
2162  
2163  
2164  
2165  
2166  
2167  
2168  
2169  
2170  
2171  
2172  
2173  
2174  
2175  
2176  
2177  
2178  
2179  
2180  
2181  
2182  
2183  
2184  
2185  
2186  
2187  
2188  
2189  
2190  
2191  
2192  
2193  
2194  
2195  
2196  
2197  
2198  
2199  
2200  
2201  
2202  
2203  
2204  
2205  
2206  
2207  
2208  
2209  
2210  
2211  
2212  
2213  
2214  
2215  
2216  
2217  
2218  
2219  
2220  
2221  
2222  
2223  
2224  
2225  
2226  
2227  
2228  
2229  
2230  
2231  
2232  
2233  
2234  
2235  
2236  
2237  
2238  
2239  
2240  
2241  
2242  
2243  
2244  
2245  
2246  
2247  
2248  
2249  
2250  
2251  
2252  
2253  
2254  
2255  
2256  
2257  
2258  
2259  
2260  
2261  
2262  
2263  
2264  
2265  
2266  
2267  
2268  
2269  
2270  
2271  
2272  
2273  
2274  
2275  
2276  
2277  
2278  
2279  
2280  
2281  
2282  
2283  
2284  
2285  
2286  
2287  
2288  
2289  
2290  
2291  
2292  
2293  
2294  
2295  
2296  
2297  
2298  
2299  
2300  
2301  
2302  
2303  
2304  
2305  
2306  
2307  
2308  
2309  
2310  
2311  
2312  
2313  
2314  
2315  
2316  
2317  
2318  
2319  
2320  
2321  
2322  
2323  
2324  
2325  
2326  
2327  
2328  
2329  
2330  
2331  
2332  
2333  
2334  
2335  
2336  
2337  
2338  
2339  
2340  
2341  
2342  
2343  
2344  
2345  
2346  
2347  
2348  
2349  
2350  
2351  
2352  
2353  
2354  
2355  
2356  
2357  
2358  
2359  
2360  
2361  
2362  
2363  
2364  
2365  
2366  
2367  
2368  
2369  
2370  
2371  
2372  
2373  
2374  
2375  
2376  
2377  
2378  
2379  
2380  
2381  
2382  
2383  
2384  
2385  
2386  
2387  
2388  
2389  
2390  
2391  
2392  
2393  
2394  
2395  
2396  
2397  
2398  
2399  
2400  
2401  
2402  
2403  
2404  
2405  
2406  
2407  
2408  
2409  
2410  
2411  
2412  
2413  
2414  
2415  
2416  
2417  
2418  
2419  
2420  
2421  
2422  
2423  
2424  
2425  
2426  
2427  
2428  
2429  
2430  
2431  
2432  
2433  
2434  
2435  
2436  
2437  
2438  
2439  
2440  
2441  
2442  
2443  
2444  
2445  
2446  
2447  
2448  
2449  
2450  
2451  
2452  
2453  
2454  
2455  
2456  
2457  
2458  
2459  
2460  
2461  
2462  
2463  
2464  
2465  
2466  
2467  
2468  
2469  
2470  
2471  
2472  
2473  
2474  
2475  
2476  
2477  
2478  
2479  
2480  
2481  
2482  
2483  
2484  
2485  
2486  
2487  
2488  
2489  
2490  
2491  
2492  
2493  
2494  
2495  
2496  
2497  
2498  
2499  
2500  
2501  
2502  
2503  
2504  
2505  
2506  
2507  
2508  
2509  
2510  
2511  
2512  
2513  
2514  
2515  
2516  
2517  
2518  
2519  
2520  
2521  
2522  
2523  
2524  
2525  
2526  
2527  
2528  
2529  
2530  
2531  
2532  
2533  
2534  
2535  
2536  
2537  
2538  
2539  
2540  
2541  
2542  
2543  
2544  
2545  
2546  
2547  
2548  
2549  
2550  
2551  
2552  
2553  
2554  
2555  
2556  
2557  
2558  
2559  
2560  
2561  
2562  
2563  
2564  
2565  
2566  
2567  
2568  
2569  
2570  
2571  
2572  
2573  
2574  
2575  
2576  
2577  
2578  
2579  
2580  
2581  
2582  
2583  
2584  
2585  
2586  
2587  
2588  
2589  
2590  
2591  
2592  
2593  
2594  
2595  
2596  
2597  
2598  
2599  
2600  
2601  
2602  
2603  
2604  
2605  
2606  
2607  
2608  
2609  
2610  
2611  
2612  
2613  
2614  
2615  
2616  
2617  
2618  
2619  
2620  
2621  
2622  
2623  
2624  
2625  
2626  
2627  
2628  
2629  
2630  
2631  
2632  
2633  
2634  
2635  
2636  
2637  
2638  
2639  
2640  
2641  
2642  
2643  
2644  
2645  
2646  
2647  
2648  
2649  
2650  
2651  
2652  
2653  
2654  
2655  
2656  
2657  
2658  
2659  
2660  
2661  
2662  
2663  
2664  
2665  
2666  
2667  
2668  
2669  
2670  
2671  
2672  
2673  
2674  
2675  
2676  
2677  
2678  
2679  
2680  
2681  
2682  
2683  
2684  
2685  
2686  
2687  
2688  
2689  
2690  
2691  
2692  
2693  
2694  
2695  
2696  
2697  
2698  
2699  
2700  
2701  
2702  
2703  
2704  
2705  
2706  
2707  
2708  
2709  
2710  
2711  
2712  
2713  
2714  
2715  
2716  
2717  
2718  
2719  
2720  
2721  
2722  
2723  
2724  
2725  
2726  
2727  
2728  
2729  
2730  
2731  
2732  
2733  
2734  
2735  
2736  
2737  
2738  
2739  
2740  
2741  
2742  
2743  
2744  
2745  
2746  
2747  
2748  
2749  
2750  
2751  
2752  
2753  
2754  
2755  
2756  
2757  
2758  
2759  
2760  
2761  
2762  
2763  
2764  
2765  
2766  
2767  
2768  
2769  
2770  
2771  
2772  
2773  
2774  
2775  
2776  
2777  
2778  
2779  
2780  
2781  
2782  
2783  
2784  
2785  
2786  
2787  
2788  
2789  
2790  
2791  
2792  
2793  
2794  
2795  
2796  
2797  
2798  
2799  
2800  
2801  
2802  
2803  
2804  
2805  
2806  
2807  
2808  
2809  
2810  
2811  
2812  
2813  
2814  
2815  
2816  
2817  
2818  
2819  
2820  
2821  
2822  
2823  
2824  
2825  
2826  
2827  
2828  
2829  
2830  
2831  
2832  
2833  
2834  
2835  
2836  
2837  
2838  
2839  
2840  
2841  
2842  
2843  
2844  
2845  
2846  
2847  
2848  
2849  
2850  
2851  
2852  
2853  
2854  
2855  
2856  
2857  
2858  
2859  
2860  
2861  
2862  
2863  
2864  
2865  
2866  
2867  
2868  
2869  
2870  
2871  
2872  
2873  
2874  
2875  
2876  
2877  
2878  
2879  
2880  
2881  
2882  
2883  
2884  
2885  
2886  
2887  
2888  
2889  
2890  
2891  
2892  
2893  
2894  
2895  
2896  
2897  
2898  
2899  
2900  
2901  
2902  
2903  
2904  
2905  
2906  
2907  
2908  
2909  
2910  
2911  
2912  
2913  
2914  
2915  
2916  
2917  
2918  
2919  
2920  
2921  
2922  
2923  
2924  
2925  
2926  
2927  
2928  
2929  
2930  
2931  
2932  
2933  
2934  
2935  
2936  
2937  
2938  
2939  
2940  
2941  
2942  
2943  
2944  
2945  
2946  
2947  
2948  
2949  
2950  
2951  
2952  
2953  
2954  
2955  
2956  
2957  
2958  
2959  
2960  
2961  
2962  
2963  
2964  
2965  
2966  
2967  
2968  
2969  
2970  
2971  
2972  
2973  
2974  
2975  
2976  
2977  
2978  
2979  
2980  
2981  
2982  
2983  
2984  
2985  
2986  
2987  
2988  
2989  
2990  
2991  
2992  
2993  
2994  
2995  
2996  
2997  
2998  
2999  
3000  
3001  
3002  
3003  
3004  
3005  
3006  
3007  
3008  
3009  
3010  
3011  
3012  
3013  
3014  
3015  
3016  
3017  
3018  
3019  
3020  
3021  
3022  
3023  
3024  
3025  
3026  
3027  
3028  
3029  
303







Pinna of fertile Frond—under side.

## DAVALLIA MAJUSCULA.

LOWE.

PLATE XXXIII. VOL. VIII.

*Microlepia majuscula?*

MOORE.

*Davallia*—In honour of Edmund Davall, a Swiss Botanist.

*Majuscula*—Somewhat larger.

### IN THE SECTION MICROLEPIA OF AUTHORS.

THIS handsome species has not hitherto been described. It was raised from spores received from India by Mr. R. Sim, of Foot's Cray, and is at present extremely rare.

Native country unknown.

The fronds, which are spreading and tripinnate, are partly erect in habit, and membranaceous. Pinnæ and pinnules alternate. Pinnæ (except near the apex) and also the basal pinnules, petiolate, the superior basal segment large; segments decurrent and rounded, apices of pinnules pointed.

Rachis and stipes minutely hirsute.

Length of frond from five to six feet; colour pale green.

Sori situated at the base of each indent.

The habit is similar to that of *Davallia polypodioides*.

Rhizoma stoutish and creeping, and covered with silky whitish hairs.

The fertile fronds are erect, and curve only towards the apex.

For fronds I am indebted to Mr. Sim, of Foot's Cray.

Mr. R. Sim, of Foot's Cray, is the only Nurseryman who possesses this Fern.

The illustration is from Mr. Sim's frond.

# GENUS IV.

## THYRSOPTERIS. KUNZE.

**FRONDS** decompound-multifid, with the fertile portion contracted and paniculate. **Veins** pinnate, with free venules, the apices forming soriferous pedicels. **A special indusium.**

**A solitary species, from Juan Fernandez.**









CHYMOPTERIS FRONDS - SHAL. FRONT.

XNNIV. 1848.







Fertile portion.

## THYRSOPTERIS ELEGANS.

KUNZE. HOOKER. J. SMITH. FEE.

PLATE XXXIV. VOL. VIII.

*Panicularia Berteri*,

A. COLLA.

*Thyrsopteris*—From the Greek, *thyrsus*—a spear entwined with ivy,  
and *pteron*—a wing. *Elegans*—Elegant.

A VERY beautiful, rare Fern, of large size, and having sterile and fertile pinnæ on the same frond, the barren frond having a *Davallia* appearance.

An evergreen stove species.

Native of Juan Fernandez, inhabiting moist woods, and shady and mountainous situations.

Fronds supra-decompound, glabrous, and coriaceous, pinnæ alternate, the pinnæ and pinnules approximate, the basal pinnules of the lower pinnæ fertile, having contracted, rachiform, unisoriferous, ultimate segments. In the fertile fronds the foliaceous substance is wanting, and the rachis and veins are thickened, forming a much compound raceme or panicle.

Rhizoma brief, stout, decumbent, and tufted.

Stipes and rachis remarkably thick, the main rachis woolly, and having a profound furrow on one side. Stipes from fifty

VOL. VIII.

P

to sixty inches in length, the leafy portion being from fifty to sixty inches long.

The lowest pinnæ twenty-four inches in length; colour vivid dark green.

Veins pinnate, venules free, their apices forming soriferous pedicels.

Involucres coriaceous, cup-shaped, entire, and petiolate, the indusium forming a calyciform cyst.

My thanks are due to Mr. J. Smith, of the Royal Gardens, Kew, for fronds of this species.

It may be procured of Messrs. Veitch, of the Exotic Nursery, Chelsea.

The illustrations are from Mr. Smith's fronds.

## GENUS V.

## CIBOTIUM. KAULFUSS.

AN interesting family of large Ferns, with fronds from five to fifteen feet in length. Decumbent, or erect and arborescent. Fronds usually glaucous beneath. Veins forked or pinnate. Venules free. Sori projecting from the margin, and always on the apex of a vein.

Tropical or subtropical, from Mexico, Assam, the Sandwich and Philippine Islands. Fronds bipinnate.

Sir W. J. Hooker, in his "Species Filicum," enumerates:—

*C. glaucum*, *Hooker and Arnott*. Sandwich Islands.

*C. glaucescens*, *Kunze*. Philippine Islands.

*C. Assamicum*, *Hooker*. Assam.

*C. Chamissoi*, *Kaulfuss*. Oahu.

*C. Menziesii*, *Hooker*. Oahu.

*C. Schiedeii*, *Schlechtendal*. Mexico.

There are only two species in cultivation in England.



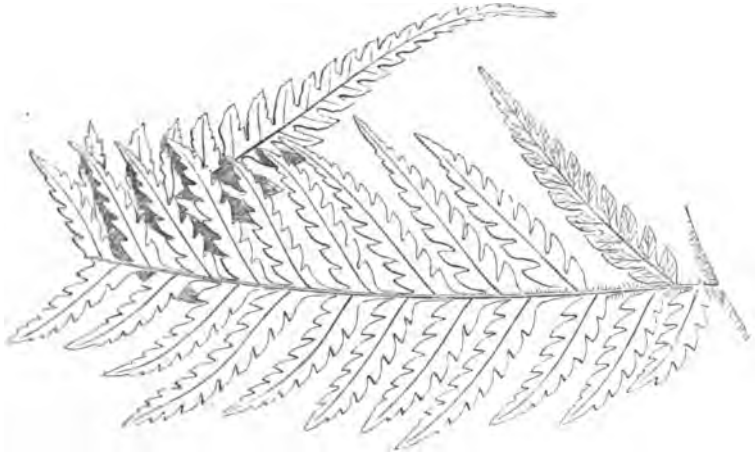












Pinna of mature Frond.

## CIBOTIUM SCHIEDEI.

· CHAMISSE AND SCHLECHTENDAL. HOOKER. J. SMITH.  
 LIEBMAN. MARTENS AND GALLEOTTI. FEE.  
 LINK. KUNZE. SCHOTT.

PLATE XXXV. VOL. VIII.

*Cibotium*—From *kibotion*—a little chest, in reference to the form of the indusium. *Schiedei*—Named in honour of Schiede.

THIS is the handsomest Fern of the genus, and very distinct, indeed it is the most graceful large species known. An arborescent species. Rising on a trunk from ten to fifteen feet high, according to Galleotti.

A stove Fern.

Native of Guatemala and Mexico. It was found at Hacienda

de la Laguna, by Schiede and Deppe, and at Jalapa by Galleotti. Liebmann says it is found in the warm temperate regions of Mexico, at an elevation of from two thousand to four thousand feet above the sea.

Introduced by Mr. Hartweg, in 1846.

Fronds spreading, wide, triangular, smooth, and bipinnate, with small pinnules, lanceolate, acuminate, and thickly hirsute with long fulvous hairs; segments ovate, serrate, beneath somewhat glaucous.

Involucres from eight to ten on each segment, coriaceous, tawny, and transversely-oblong in form.

Veins simple or forked.

Pinnæ small, only three or four inches long, and ending in a very narrow point.

Stipes and rachis long, and very stout, brownish, and very hairy, rising from a crown densely covered with long, silky, shining brown hairs.

Length of frond from six to ten feet; colour yellowish green above, somewhat glaucous beneath.

For fronds I am indebted to M. Schott, Director of the Imperial Gardens of Schonbrunn, Vienna; Mr. J. Smith, Curator of the Royal Gardens, Kew; and to Mr. Sim, of Foot's Cray.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Jackson, of Kingston; A. Henderson, of Pine-apple Place; Rollisson, of Tooting; and E. G. Henderson, of St. John's Wood.

The illustrations are from Mr. Smith's fronds.

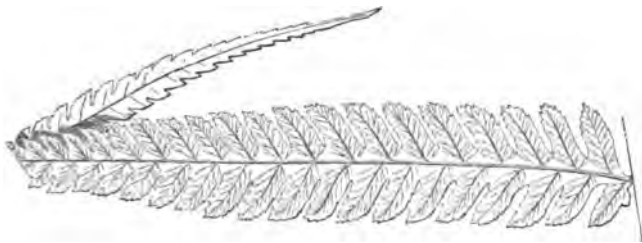












Pinnule of mature Frond.

## CIBOTIUM GLAUDESCENS.

KUNZE. HOOKER. FEE. SCHOTT.

PLATE XXXVI. VOL. VIII.

<i>Cibotium Barometz,</i>	J. SMITH.
“ <i>glaucophyllum,</i>	PRESL. BERLIN GARDENS.
“ <i>glaucum,</i>	J. SMITH. (Not of HOOKER AND ARNOTT.)
“ <i>Cumingii,</i>	KUNZE.
<i>Aspidium Barometz,</i>	ENGLISH GARDENS.
<i>Balanium glaucescens,</i>	LINK. KUNZE.
<i>Nephrodium Barometz,</i>	ENGLISH GARDENS.

*Cibotium*—From *kibotion*—a little chest, in reference to the form of the indusium. *Glaucescens*—Glaucous.

An interesting greenhouse species.

Native of the Philippine Islands and China.

Fronds very large, spreading, triangular, and bipinnate; pinnæ linear-oblong, much acuminate, caudate, and profoundly pin-natifid; segments oblong-acute and serrate.

Veins usually simple.

Sori on the margin, solitary, (one on each side the base of the segments,) subcoriaceous, glaucous, and reniform.

Introduced into this country by Mr. Joseph Reeves, and received into the Royal Gardens, Kew, in 1834, from the Messrs. Loddiges.

Rhizoma creeping and massive.

Rachis and stipes stout, lengthy, and hirsute, especially so at the base.

Length of frond from six to eight feet; a bright shining green above, glaucous beneath.

My thanks are due to Messrs. E. G. Henderson, of St. John's Wood, and to Mr. Masters, of Canterbury, for plants of this Fern; and to Mr. Sim, of Foot's Cray, for fronds.

It may be procured from any of the principal Nurserymen.

The illustrations are from Mr. Sim's fronds.

## GENUS VI.

## TRICHIOCARPA. J. SMITH.

FRONDS bi-tripinnatifid, deltoid, pinnæ distant, pinnate below, pinnatifid and decurrent above. Veins uniform and reticulated; the areoles transverse oblong; marginal veinlets free, and exerted beyond the margin, each becoming a pedicel, bearing a globose sorus. Indusium spreading, entire, and cyathiform. This genus differs from *Deparia*, and more especially in the distinctly reticulated veins.

A solitary example, from New Caledonia.















Portion of pinna of fertile Frond -under side.

## TRICHIOCARPA MOORII.

J. SMITH.

PLATE XXXVII. VOL. VIII.

*Deparia Moorii*,  
*Cionidium Moorii*,

HOOKEE.  
MOORE.

*Trichiocarpa*—From the Greek *trichos*—a hair, and *karpus*—fruit, in allusion to the spores being on a hair-like stem. *Moorii*—In honour of Mr. Thomas Moore, of the Chelsea Botanic Gardens.

AN interesting species, and rare in cultivation.

An evergreen stove Fern.

Native of New Caledonia.

The fronds deltoid, bi-tripinnatifid, and membranaceo-herbaceous. The pinnæ distant, pinnate below and pinnatifid decurrent above. Pinnules lanceolate, sinuose-lobed or pinnatifid. Veins pinnately forked from a central costa; venules reticulated,

areoles transverse oblong, marginal veinlets free, exserted beyond the margin, each forming a pedicel for the sori at their extremity. Indusium spreading and entire.

Rhizoma brief and decumbent.

Length of frond from six to eighteen inches.

For fronds my thanks are due to Mr. J. Smith, the Curator of the Royal Gardens, Kew.

It does not appear in any Catalogue.

The illustration is from Mr. Smith's frond.

## GENUS VII.

DEPARIA. HOOKER AND GREVILLE.

FRONDS bipinnatifid. Veins pinnate, with free venules. Sori terminal and exserted. Indusium conniving, forming a calyciform, pedicellate, and vertical cyst.

Sir W. J. Hooker, in his "Species Filicum," gives two species, namely, *D. prolifera*, Hooker, and *D. Matthewsii*, Hooker, the latter not yet introduced in a living state.







100

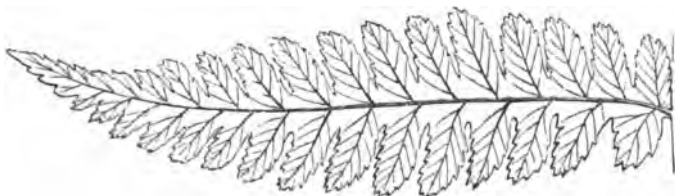
THE FERN FROND. A—APPROXIMATELY 1/2 INCH  
 SCALE. (1/2 INCH.)

Digitized by Google









Pinna of barren Frond—upper side.

## DEPARIA PROLIFERA.

HOOKER AND GREVILLE. FEE. HOOKER AND BAUER.

PLATE XXXVIII. VOL. VIII.

*Dicksonia prolifera*,  
*Deparia Macraei*,

KAULFUSS.  
HOOKER AND GREVILLE.

*Deparia*—From the Greek—a little cup.

*Prolifera*—Proliferous.

A PRETTY and distinct species, worthy of general cultivation, but as yet very rare.

An evergreen stove species.

Native of the Sandwich Islands, Oahu, according to Chamisso, and Owhyhee, according to Macrae.

Fronds spreading, triangular-elongate, herbaceous, pinnato-pinnatifid, and glabrous, the divisions profoundly cut into rounded lobes. Pinnæ sub-opposite below, alternate above, elongated, oblong-acuminate; segments distant, pinnules about twenty pair on each pinna.

Veins simple, from a central costa; venules free, extending to the margin, and in the fertile fronds forming stalks to the sori.

Sori marginal, the indusia membranaceous, shallow cup-shaped, exserted, and stipitate.

Stipes at the base covered with long red scales.

Rhizoma stout, covered with dark coloured scales, and creeping.

Length of frond from fifteen to thirty inches; colour very pale green.

Each vigorous frond is viviparous near its point.

The margin of the fertile frond being fringed with stalked sori, the plant has a very attractive appearance, looking as if surrounded by a row of small fungi.

For fronds my thanks are due to Mr. J. Smith, of the Royal Gardens, Kew, and to Mr. Sim, of Foot's Cray.

The plant may be procured of Mr. Sim, of Foot's Cray.

The illustration is from Mr. Smith's fronds.



## GENUS VIII.

### DICKSONIA.

IN this genus are the families of *Sitolobium*, *Balantium*, and *Dicksonia*; all large Ferns, having veins simple or pinnate, and terminal sori. Some of the species are arborescent, growing to a great height.

Mr. Smith, in his "Catalogue of the Ferns Grown at Kew," gives the following:—

*Sitolobium punctilobum*, *J. Sm.*  
*adiantoides*, *J. Smith.*  
*Davallioides*, *J. Smith.*  
*rubiginosum*, *J. Smith.*  
*Moluccanum*, *J. Smith.*

*Balantium culcita*, *Kaulfuss.*  
*Dicksonia lanata*, *Colenso.*  
*antarctica*, *Labillardiere.*  
*arborescens*, *L'Heritier.*  
*squarrosa*, *Swartz.*

Sir W. J. Hooker, in his "Species Filicum," describes,—

*Dicksonia arborescens*, *L'Heritier*, St. Helena. Grows ten feet high.

*D. antarctica*, *Labillardiere*, Tasmania. Grows thirty-five feet high.

*D. Sellowiana*, *Hooker*, Brazil.

*D. Berteroana*, *Hooker*, Juan Fernandez. Grows fifteen feet high.

*D. squarrosa*, *Swartz*, New Zealand. Grows eight feet high.

*D. fibrosa*, *Colenso*, New Zealand. Grows eighteen feet high.

*D. lanata*, *Colenso*, New Zealand. Grows five feet high.

*Culcita*, *L'Heritier*, Madeira.

*Coniifolia*, *Hooker*, Caraccas.

*Martiana*, *Klotzsch*, Brazil.

*Dubia*, *Gaudichaud*, Tasmania.

*Straminea*, *Labillardiere*, New Caledonia.

*Davallioides*, *Brown*, Port Jackson.

*Kaulfussiana*, *Gaudichaud*, Sandwich Islands.

*Abrupta*, *Bory*, Bourbon.

*Sorbifolia*, *Smith*, East Indies.

*Plumieri*, *Hooker*, St. Domingo.

*Lindeni*, *Hooker*, Caraccas.

#### DOUBTFUL SPECIES.

*Marginalis*, *Swartz*, Japan.

*Linearis*, *Cavanilles*, Philippine Islands.

*Japonica*, *Swartz*, Japan.

*Strigosa*, *Swartz*, Japan.

*Zeylanica*, *Swartz*, Ceylon.

*Madagascariensis*, *Kunze*, Madagascar.

In the sub-genus *Patania*, (the *Sitolobium* of Desvaux,) Sir W. Hooker describes,—

*Pavoni*, *Hooker*, Peru.

*Concinna*, *Hooker*.

*Adiantoides*, *Hooker*, Caraccas.

*Erosa*, *Kunze*, Peru.

*Ordinata*, *Kaulfuss*, Porto-Rico.

*Cicutaria*, *Swartz*, Jamaica.

*Cornuta*, *Kaulfuss*, Brazil.

*Dissecta*, *Swartz*, Jamaica.

*Apiifolia*, *Swartz*, Jamaica.

*Flaccida*, *Swartz*, Pacific Isles.

*Moluccana*, *Blume*, Moluccas.

*Scandens*, *Blume*, Java.

*Javanica*, *Blume*, Java.

*Distenta*, *Kunze*, Mexico.

*Rubiginosa*, *Kaulfuss*, Brazil.

*Punctiloba*, *Hooker*, U. States

*Anthriscifolia*, *Kaulfuss*, Bourbon.

*Appendiculata*, *Wallich*, Nepal.

*Deltoidea*, *Hooker*, Ceylon.

*Scabra*, *Wallich*, Nepal.

*Cuneata*, *Hooker*, Luzon.

*Smithii*, *Hooker*, Luzon.

## DOUBTFUL SPECIES.

*Obtusifolia*, *Willdenow*, Carac-  
cas.

*Strigosa*, *Swartz*, Japan.

*Domingensis*, *Desvauz*, His-  
paniola.

*Multifida*, *Swartz*, East Indies.

*Millefolium*, *Desvauz*, E. Indies.

Thus Sir W. J. Hooker describes fifty-one species, eleven of which are inserted doubtfully.

In the countries where the arborescent *Dicksonias* grow they are quite a feature, and indeed very useful, for New Zealand travellers make them their hotels, sleeping under the shadow of their fronds, and spreading their blankets upon cut fronds. It is necessary to consider for a moment how gigantic these Ferns are, rising to the height of from thirty to forty feet, and then spreading their branches in every direction to the distance of forty or fifty feet from their arborescent trunks, capable of affording shelter to a regiment of soldiers, if necessary.

The *Dicksonias* are not the only large Ferns: the *Cyathea dealbata*, for instance, to be hereafter described, rises on a trunk fifteen feet high, and is perhaps the most magnificent of all Ferns,—singularly delicate in appearance, and the fronds covered beneath with a white or glaucous farina; then again the genus *Angiopteris*, the “Prince of Ferns,” the somewhat similar-looking *Marattias*, etc., some of which are cultivated in this country, and will pass under our notice.

The *Dicksonias* are greenhouse or stove Ferns, with one solitary exception, from the United States and North America. We have, consequently, no British example. Perhaps the *Dicksonia antarctica* might live in the open air in the west of England, as in its native climate snow rests upon its fronds, and it has to withstand somewhat severe frosts, although they are only of short duration.





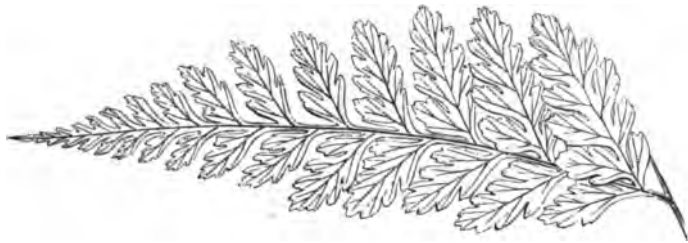




DICKSONIA DIGITATA.—APEX OF FROND.  
LXXIX—VOL. V.







Portion of pinna of barren Frond.

## DICKSONIA CULCITA.

L'HERITIER. HOOKER. MOORE.

PLATE XXXIX. VOL. VIII.

*Balantium culcita*,  
 " "  
*Culcita macrocarpa*,

KAULFUSS. HOOKER. J. SMITH.  
 MOORE AND HOULSTON.  
 PRESL. HOOKER. FREE.

*Dicksonia*—Named after James Dickson, a British botanist.  
*Culcita*—A cushion.

A VERY handsome, rare, large-growing Fern, having singular fructification; the form of the indusium somewhat resembling a purse; hence its name of *Balantium* by Kaulfuss, from *Balantion*—a purse. A robust, large-growing species, worthy of general cultivation.

An evergreen warm greenhouse Fern.

Native of Madeira and the mountains of the Azores, at an elevation of from two to three thousand feet, where it has been noticed by Masson, Guthrie, and Watson.

Fronde glabrous, sub-coriaceous, decompose, and tri-quadripinnate; ultimate segments oblong and dentate.

Veins pinnate; venules simple or forked, direct, and free.

Caudex creeping, and densely covered with brown hairs.

Stipes long, covered with dense, lengthy, fulvous, silky hair near the base.

Sori large, from one to three on each lobe or pinnule, nearly globose, exserted, the valves of the indusium concave and nearly equal.

Fronds terminal, the fertile ones contracted.

Length of frond from forty to one hundred inches. Colour a rich dark shining green.

For fronds my thanks are tendered to Mr. J. Smith, Royal Gardens, Kew; Mr. D. Moore, of the Glasnevin Gardens, Dublin; and to Mr. Veitch, of the Exotic Nursery, Chelsea.

It may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; and E. G. Henderson, of the Wellington Nursery.

The illustration is from Mr. Veitch's fronds.







110

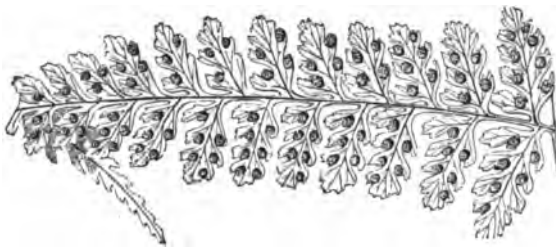
Digitized by Google

ADIANTHUM CICUTARIA.—PORTION OF PINNA.









Portion of pinna of fertile Frond—under side.

## DICKSONIA CICUTARIA.

SWARTZ. HOOKER.

WILLDENOW. FEE. SLOANE. LIEBMANN.

PLATE XL. VOL. VIII.

<i>Dicksonia adiantoides</i> ,	HUMBOLDT. LINK. SCHOTT. ( <i>Not of</i> HOOKER, PRESL, or LIEBMANN.)
<i>Sitolobium</i> “	J. SMITH. MOORE AND HOULSTON.
<i>Polypodium globuliferum</i> ,	PLUMIER.
<i>Dicksonia Hookeriana</i> ,	KLOTZSCH. SLOANE. PLUMIER.
“ <i>tenera</i> ,	MARTIUS. HOOKER. LINK.
“ <i>dissecta</i> ,	SIEBER.
<i>Patania erosa</i> ,	PRESL.
<i>Dennstadtia adiantoides</i> ,	MOORE.

*Dicksonia*—Named after James Dickson, a British botanist.

*Cicutaria*—Cow-bane like.

### IN THE SECTION SITOLOBIUM OF AUTHORS.

A VERY handsome Fern of large size, spreading its fronds on stout erect stalks, easily cultivated, and wherever grown, freely springing up from spores.

A very variable Fern.

An evergreen stove species.

Native of the West Indies, Tropical and South America, Brazil, Mexico—at an elevation of from two to four thousand feet—Jamaica, Cocos Island, Guayaquil, Guatemala, and Peru.

Raised from spores in the Royal Gardens, Kew, in 1834.

The fronds, which are glabrous, are triangularly-elongate in form, spreading, and tripinnate.

The pinnæ and pinnules triangularly elongate-acuminate, with flat, oblong, somewhat pinnatifid lobes, rounded at the apex, crenate on the margin, and decurrent.

Rachis, costa, and veins glabrous, or hairy.

Sori globose, exserted, and produced as little cups on the apices of the venules, the special and accessory indusium about equal and forming a reflexed calyciform cyst, containing the spore cases.

Fertile segments contracted, and having a very elegant appearance.

Rhizoma creeping.

Veins pinnate; venules direct and free.

Length of frond from four to eight feet. Colour a pale vivid shining green.

Amongst the different forms of this species may be mentioned.—The Fern known as *Dicksonia tenera* of Martius, found in Brazil, is more membranaceous. Another known as *Dicksonia dissecta* of Sieber, has the barren segments more cuneate, and serrated above: it is a native of Peru and Guatemala. A third form, *Patania erosa* of Presl, has larger and more hairy pinnules than in the normal form, and which are less profoundly lobed, and brighter green in colour.

For plants my thanks are due to Sir Oswald Mosley, Bart., of Rolleston Hall; Mrs. Delves, of Tunbridge Wells; Mr. Sim, of Foot's Cray; Mr. Downs, of Ilfracombe; Mr. Lamb, gardener to Mr. F. Wright, of Osmaston Manor, near Ashbourne; and to Mr. Stewart, late gardener to Lord Vernon, at Sudbury, Staffordshire; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrunn, near Vienna; and to Mr. G. Norman, of Hull.

It is in the Catalogues of Messrs. Rollisson, of Tooting; Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; and Cooling, of Derby.

The illustration is from a plant in my own collection.





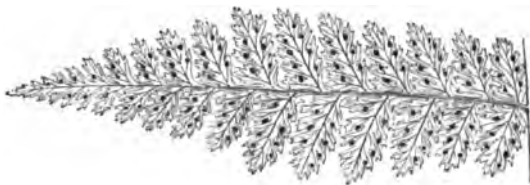
21

DAVALLIA DAVALLIODES.—PINNA.

XLI—Vol. 8.







Portion of pinna of fertile Frond—under side.

## DICKSONIA DAVALLIODES.

R. BROWN. HOOKER. LINK.

PLATE XLI. VOL. VIII.

*Sitolobium davallioides*,  
*Dennstaedtia* “

J. SMITH. MOORE AND HOULSTON.  
MOORE.

*Dicksonia*—Named after James Dickson, a British botanist.

*Davallioides*—Davallia-like.

IN THE SECTION *SITOLOBIUM* OF AUTHORS.

A DELICATE-LOOKING species, easily cultivated, having erect fronds from twelve to fifteen inches wide, on lengthy dark stalks.

An evergreen warm greenhouse Fern.

Native of New Holland, found at Port Jackson.

Raised from spores in the Royal Gardens, Kew, in 1833.

Fronds very membranaceous, flaccid, deltoid, tripinnate, and slightly pubescent; pinnæ lanceolate, pinnules oblong, profoundly pinnatifid, and having small oblong dentate segments.

Veins pinnate; venules direct and free.

Rhizoma creeping, or scandent, slender and elongated.

VOL. VIII.

8



Sori small, few, having glabrous involucre, the exterior valve being smaller.

Length of frond from twenty-four to thirty-six inches. Colour deep green.

Sir W. J. Hooker remarks that the present species is closely allied to *Dicksonia dubia* of Gaudichaud.

For plants my thanks are due to Sir Oswald Mosley, Bart., Rolleston Hall; Mr. Lamb, gardener to Mr. F. Wright, Osmaston Manor; and to Mr. Stewart, late gardener to Lord Vernon, Sudbury; for fronds to Mr. Joseph Henderson, of Wentworth; and Mr. Norman, of Hull.

It may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; Stansfield, of Todmorden; Booth, of Hamburg; and Cooling, of Derby.

The illustration is from a plant in my own collection.





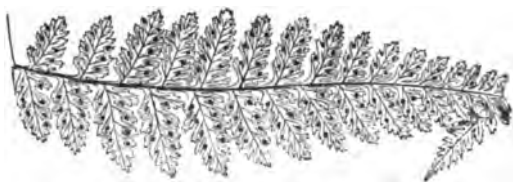
100

Digitized by Google

PTERIS A. PUNCTILOB .  
XIII. 111.







Pinna of fertile Frond—under side.

## DICKSONIA PUNCTILOBA.

HOOKER. FEE.

PLATE XLII. VOL. VIII.

<i>Sitolobium punctilobum</i> ,	J. SMITH. MOORE AND HOULSTON.
“ <i>pilosiusculum</i> ,	DESLAUX. J. SMITH.
<i>Dicksonia pubescens</i> ,	SCHUHR. PRESL.
“ <i>pilosiuscula</i> ,	WILLDENOW. HOOKER. (Not RADDI.)
“ <i>punctilobula</i> ,	KUNZE.
<i>Nephrodium punctilobum</i> ,	MICHAUX. RICHARD.
<i>Aspidium</i> “	SWARTZ.
<i>Dennstædtia punctilobula</i> ,	MOORE.
<i>Alectum pilosiusculum</i> ,	LINK.

*Dicksonia*—Named after James Dickson, a British botanist.

*Punctiloba*—Dotted-lobed.

### IN THE SECTION SITOLOBIUM OF AUTHORS.

AN interesting well-known species, somewhat resembling *Asplenium Felix-fœmina*, and having an upright habit, the only hardy species, and readily cultivated in ordinary soils.

A hardy deciduous Fern.

Native of the United States and Canada.

Cultivated in the Royal Gardens, Kew, in the year 1822.

Fronds membranaceous, sub-tripinnate, lanceolate in form, pinnae lanceolate, pinnules oblong, adnate, profoundly pinnatifid, having oblong, blunt, inciso-dentate segments.

Veins pinnate; venules direct and free.

Sori minute—seldom more than one, in the sinus or upper margin of each segment.

Rachis and costa, glanduloso-pilose.

Fronds lateral.

Rhizoma slender and creeping.

Length of frond from twelve to twenty-four inches. Colour very light green; when dried, pale straw-colour.

Stipes reddish brown.

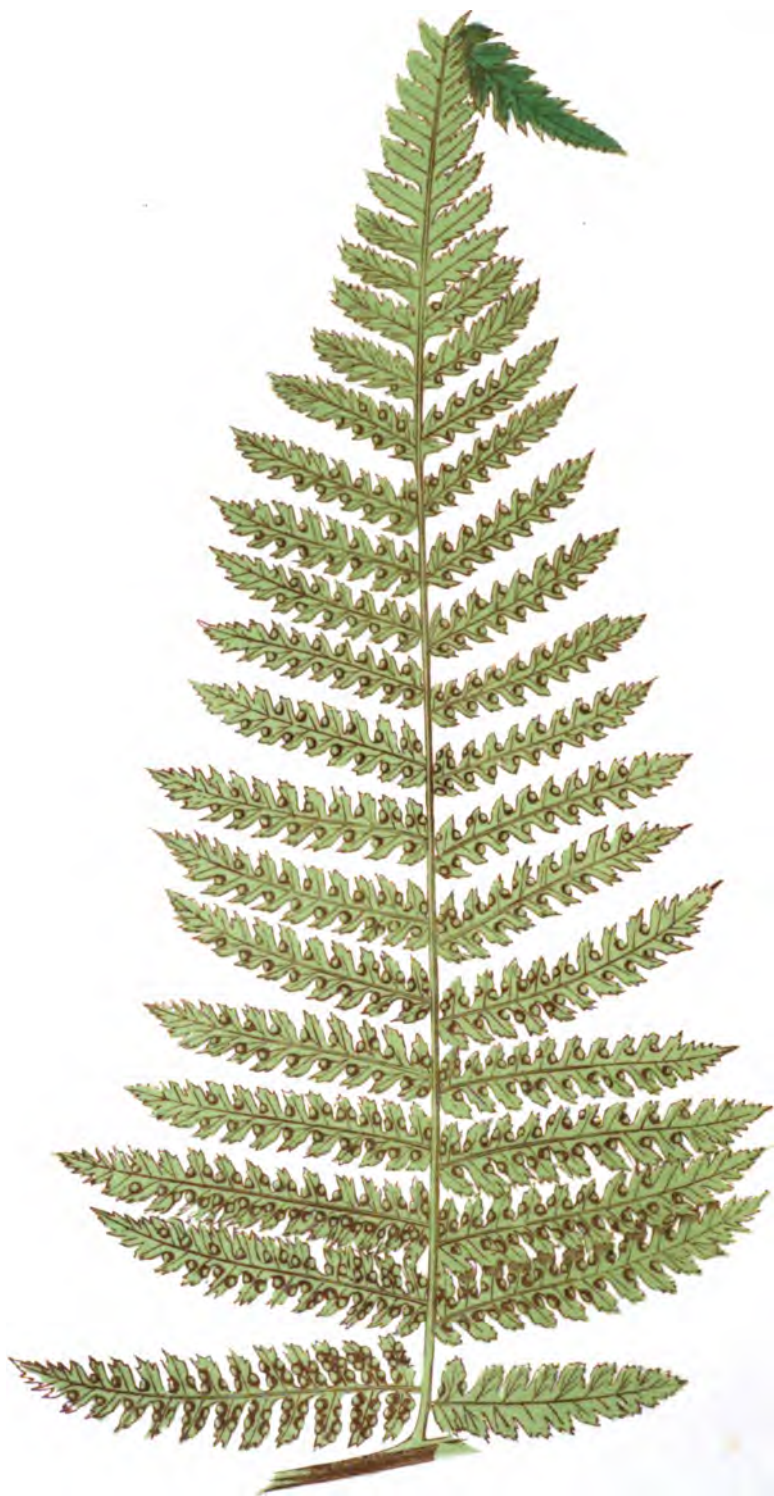
For a plant my thanks are due to Mr. Joseph Henderson, of Wentworth; and for fronds to Mr. George Norman, of Hull.

It may be procured of Messrs. Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; Stansfield, of Todmorden; Pearson, of Chilwell; and E. Cooling, of Derby.

The illustration is from a plant in my own collection.





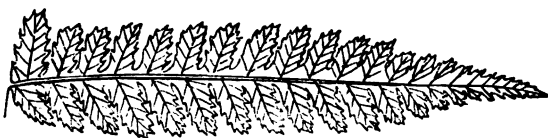


25

DRYOPTERIS ANTARCTICA.—PINNA, by Google  
N. III—VOL. 8.







Portion of pinna of barren Frond.

## DICKSONIA ANTARCTICA.

LABILLARDIERE. J. SMITH. HOOKER. BROWN.  
MOORE AND HOULSTON.

PLATE XLIII. VOL. VIII.

*Balantium antarcticum*,  
*Cibotium Billardieri*,

PRESL. FEE. SCHOTT.  
KAULFUSS.

*Dicksonia*—Named after James Dickson, a British botanist.  
*Antarctica*—Antarctic.

THIS magnificent species is a universal favourite, wherever grown or exhibited it is certain to attract universal attention. A large and rapid grower, easily cultivated, and requiring little or no care, provided sufficient room is allowed for the expansion of its fronds, and the plant is liberally supplied with water: all fast-growing Ferns require abundance of water, most of the large species growing wildly in moist and boggy situations.

An evergreen warm greenhouse species.

Native of New Holland, Tasmania, and Australia.

Introduced into the Royal Gardens, Kew, in 1824, by Mr. A. Cunningham.

Fronds glabrous, coriaceous, lanceolate in form, sub-tripin-

nate, and drooping; pinnæ and pinnules linear-lanceolate, rigid, and profoundly pinnatifid; segments ovate, very acute, and inciso-serrate.

Sori confined to the lower pinnæ, globose in form, and produced on the apices of the venules, small in size, but numerous. Indusium coriaceous.

Veins pinnate; venules simple, direct, and free.

Stipes brief, and, as well as the rachis, covered with hair-like ruddy scales.

Fronds terminal, adherent to an arborescent caudex or trunk, rising to the height of about thirty-five feet.

Fronds very large, from six to twelve feet in cultivated plants in England, and much larger when growing in their native countries. Colour a rich, shining, dark green, paler beneath.

There are some very fine specimens at His Grace the Duke of Devonshire's seat, at Chatsworth; at Earl Fitzwilliam's seat, at Wentworth, Yorkshire; others at the Royal Gardens, Kew, the Crystal Palace, etc. The specimen at Wentworth is of very great size. In Tasmania it gives so great a feature to the landscape where it grows, as to merit the appellation of the "Fern Valley," etc.

The magnificent plant at Wentworth House, was sent to Mr. Joseph Henderson, from Australia, rather more than twenty-five years ago; the caudex was then little more than two feet long, and the plant had on one small frond, which it had recently made, all the fronds having been cut off previous to transportation from its native country to its destination. Mr. Henderson can form no idea as to the age of the plant, as it might have been sixty, eighty, or a hundred years old before it left Australia. The plant has thrived well since it was deposited in the Fern house at Wentworth, and the height of the caudex is now four feet and a half, and the girth three feet from the surface of the tub—in which it grows—is three feet. The length of the longest frond is eleven feet, and the width, from point to point of the opposite pinnæ, three feet two inches. The number of fronds upon the tree is fifty-six. This plant covers an area of eighteen feet six inches in diameter, which is a circumference of no less than fifty-five feet six inches. It is a noble specimen, and well worth a long journey to behold.

I may here remark that there exists a very fine collection of Ferns at Wentworth, under the able management of Mr. Joseph Henderson, a gentleman who, for many years has made this branch of Cryptogamic botany his favourite study, and who is noted for his kindness to those who feel a desire to see the collection, or who wish for information on any subject connected with it. I myself am especially obligated for much valuable information, as well as many plants and fronds: indeed, the present work is largely indebted to Mr. Henderson, for the kind assistance he has rendered from time to time.

For a plant and fronds my thanks are due to Mr. Joseph Henderson, of Wentworth.

It may be procured from Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Stansfield, of Todmorden; Booth, of Hamburg; and Cooling, of Derby.

The illustration is from Mr. Henderson's fronds.









DICESONIA SQUARROSA.—LINN.

XIV—COL. 8.







Portion of pinna of barren Frond.

## DICKSONIA SQUARROSA.

SWARTZ. SCHKUHR. J. SMITH. HOOKER.  
MOORE AND HOULSTON.

PLATE XLIV. VOL. VIII.

*Trichomanes squarrosus*,  
*Balanium squarrosus*,

FORSTER.  
KUNZE. FEE.

*Dicksonia*—After James Dickson, a British botanist.  
*Squarrosa*—Rough and scurfy.

ANOTHER fine tree Fern, and very beautiful, bearing graceful fronds.

An evergreen warm greenhouse species.

Native of New Zealand.

Introduced into the Royal Gardens, Kew, in 1842, by Mr. J. Edgerly.

Fronds coriaceous, ovate-lanceolate in form, and tripinnate; ultimate pinnæ oblong and profoundly pinnatifid; segments somewhat ovate, pungent, and mucronately-serrated. Beneath the segments there are small lacerated scales.

Veins pinnate; venules simple, direct, and free.

Sori globose, small, one on each lobe; both valves of the involucre concave, and nearly equal.

Fertile segments much smaller, and contracted.

VOL. VIII.

T

Fronds terminal, adherent to an arborescent caudex, which rises ten feet or more high, and is covered with the bases of the old stalks.

Stipes and rachis dark purplish or blackish, covered with raised points and blackish hairs.

Length of frond from ten to fifteen feet; colour a deep, rich, bright green.

For fronds my thanks are due to Mr. Joseph Henderson, of Wentworth, and to Mr. Ingram, of the Royal Gardens, Windsor.

It may be procured of Messrs. Veitch, Jun., Exotic Nursery, Chelsea.

The illustration is from Mr. Henderson's frond.













Portion of pinna of fertile Frond—under side.

## DICKSONIA RUBIGINOSA.

KAULFUSS. KUNZE. HOOKER. LINK. PRESL.  
FEE. LIEBMANN. SCHOTT.

PLATE XLV. VOL. VIII.

*Sitolobium rubiginosum*, J. SMITH. MOORE AND HOULSTON.

*Dicksonia*—Named after James Dickson, a British botanist.

*Rubiginosa*—Rusty.

IN THE SECTION SITLOBIUM OF AUTHORS.

A STRAGGLING-growing species.

An evergreen stove Fern.

Native of Tropical America, Brazil, (Rio Janeiro, Tejuca, and Bahia,) Mexico, (temperate regions of,) Columbia, Peru, Guatemala, and Jamaica.

Raised in the Royal Gardens, Kew, in 1841.

The fronds, which are spreading and membranaceous, are hairy, triangularly elongate in form, and tripinnate; pinnæ oblong-obtuse, very hairy beneath; pinnules oblong-acuminate; segments pinnatifid, rounded at the apex, and largest on the

upper side next the rachis, the margin being obtusely-dentate.

Veins pinnate; venules direct and free.

Rachis and stipes reddish brown and hairy.

Lateral; rhizoma scandent.

Sori remarkably small for a *Dicksonia*, situated chiefly on the upper superior margin in the sinuses of the sharp teeth, and cup-shaped.

Length of frond from thirty-five to seventy inches; colour darkish green.

For a plant my thanks are due to Mr. James, of Vauvert; to Mr. J. Smith, of the Royal Gardens, Kew; and to Mr. G. Norman, of Hull.

It may be procured of Messrs. A. Henderson, of Pine-apple Place; Booth, of Hamburg; and E. Cooling, of Derby.

The illustration is from Mr. Smith's frond.











Portion of pinna of barren Frond.

DICKSONIA MOLUCCANA.

BLUME. HOOKER. FEE. LOBB.

PLATE XLVI. VOL. VIII.

*Sitolobium Moluccanum*,

J. SMITH.

*Dicksonia*—Named after James Dickson, a British botanist.

*Moluccana*—From the mountains of the Moluccas.

IN THE SECTION SITOLOBIUM OF AUTHORS.

A DISTINCT, yet not common species.

A warm greenhouse Fern.

Native of the mountains of the Moluccas, where it was found by Blume.

Fronds coriaceous, tri-pinnatifid, somewhat lengthy, triangular in form; pinnæ opposite, oblong-lanceolate in shape, acuminate, pinnules lanceolate, profoundly pinnatifid, bluntly toothed on the upper margin.

Rachis and stipes aculeate or thorny, the latter scandent.

Fronds somewhat downy beneath.

Veins pinnate; venules direct and free.

Sori globose.



My thanks are due to Mr. George Norman, of Hull, for a plant of this Fern; and to Mr. J. Smith, Curator of the Royal Gardens, Kew, for fronds.

It does not appear in any of the Nurserymen's Catalogues.  
The illustration is from Mr. Smith's frond.

## GLEICHENIÆ. J. SMITH.

HAVING globose or pyriform sessile sporangia, opening vertically; ring transverse.

Sori punctiform and naked.

## GENUS I.

## GLEICHENIA. BROWN.

A MOST remarkable and at the same time handsome group of Ferns, making (under successful cultivation) magnificent plants. The most aristocratic-looking genus of Ferns. The fronds varying from ten to seventy inches, and being dichotomously branched.

Veins forked, either simply or pinnately; venules free, the exterior one bearing sporangia on its apex. Sori punctiform and naked, non-indusiate, superficial, or immersed, consisting of but few spore-cases, which are sessile and deciduous.

Sir W. J. Hooker describes the following:—

Speluncæ, <i>Brown</i> , New South Wales.	Longissima, <i>Blume</i> , Java.
Rupetris, <i>Brown</i> , New South Wales.	Vulcanica, <i>Blume</i> , Java.
Alpina, <i>Brown</i> , Tasmania.	Glauca, <i>Swartz</i> , Japan.
Polypodioides, <i>Smith</i> , South Africa.	Gigantea, <i>Wallich</i> , Nepal.
Microphylla, <i>Brown</i> , Tasmania.	Bancroftii, <i>Hooker</i> , Jamaica.
Dicarpa, <i>Brown</i> , Tasmania.	Excelsa, <i>J. Smith</i> , Luzon.
Semivestita, <i>Labillardiere</i> , New Caledonia.	Flabellata, <i>Brown</i> , New Holland.
Hecistophylla, <i>A. Cunningham</i> , New Zealand.	Tenera, <i>Brown</i> , Tasmania.
	Cunninghami, <i>Heward</i> , New Zealand.
	Pedalis, <i>Kaulfuss</i> , Chili.
	Cryptocarpa, <i>Hooker</i> , Chilce.
	Acutifolia, <i>Hooker</i> , Patagonia.

*Revoluta*, *Hooker*, Quito.  
*Simplex*, *Hooker*, Quito.  
*Pubescens*, *Willdenow*, Brazil.  
*Mathewsii*, *Hooker*, Peru.  
*Farinosa*, *Kaulfuss*, 'Trinidad.  
*Owhyhensis*, *Hooker*, Owhyhee.  
*Longipinnata*, *Hooker*, Surinam.  
*Flagellaris*, *Sprengel*, Mauritius.  
*Lævigata*, *Willdenow*, Java.  
*Ferruginea*, *Blume*, Java.  
*Vestita*, *Blume*, Java.  
*Bifurcata*, *Blume*, Java.  
*Hirta*, *Blume*, Moluccas.  
*Rufinervis*, *Martius*, Brazil.  
*Glaucescens*, *Willdenow*, Brazil.  
*Nervosa*, *Kaulfuss*, Brazil.

*Dichotoma*, *Willdenow*, East Indies.  
*Klotzschii*, *Hooker*, Brazil.

## DOUBTFUL SPECIES.

*Tenuis*, *Presl*, (perhaps *Glaucescens*.)  
*Nitida*, *Presl*, (perhaps *Dichotoma*.)  
*Remota*, *Kaulfuss*, Brazil.  
*Tomentosa*, *Swartz*, (perhaps *Pubescens*.)  
*Fulva*, *Desvauz*.  
*Elata*, *Desvauz*.  
*Truncata*, *Willdenow*.  
*Cumingiana*, *Presl*.

Altogether Sir W. J. Hooker enumerates forty-six species, the last eight of which are only mentioned as doubtful species.

Mr. J. Smith, in his "Catalogue of the Ferns of Kew," gives—*Microphylla*, *Dicarpa*, *Speluncæ*, *Flabellata*, and *Dichotoma*.

Mr. Sim, in his Catalogue, adds also,—*Hecistophylla*, *Semivestita*, *Rupestris*, species (Australia.)





10

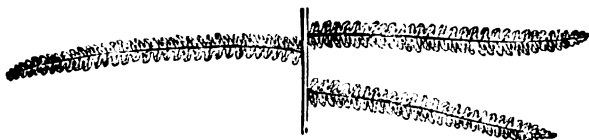
GLEICHENIA MICROPHYLLA.

XLVII-VOL. 8.

Digitized by Google







Portion of mature branch.

## GLEICHENIA MICROPHYLLA.

BROWN. HOOKER. J. SMITH.

PLATE XLVII. VOL. VIII.

*Gleichenia Spelunca*,

GUILLEMIN. (*Not of*  
BROWN, HOOKER,  
MOORE, nor SMITH.)

“ *circinata*?

SWARTZ.

“ *circinalis*,

SWARTZ. MOORE.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Microphylla*—Small-leaved.

AN exceedingly elegant Fern, of large size, with a very dense symmetrical habit.

A warm greenhouse species.

Native of Tasmania and Port Jackson, in New Holland.

Introduced into the Royal Gardens, Kew, in 1845, having been received from Mr. R. Gunn.

Fronds dichotomous divaricated; the branches pinnate; the pinnæ pinnatifid and glabrous; segments sub-rotund, nearly plane, and having the margins somewhat recurved, exposing the sori more to view than in *Gleichenia semivestita*.

The rachis and branches covered with chaffy ferruginous hairs.

Veins indistinct.



Sori terminal, composed of three or four exserted, lax, deciduous capsules or spore-cases, situated at the apex of a veinlet, punctiform and naked.

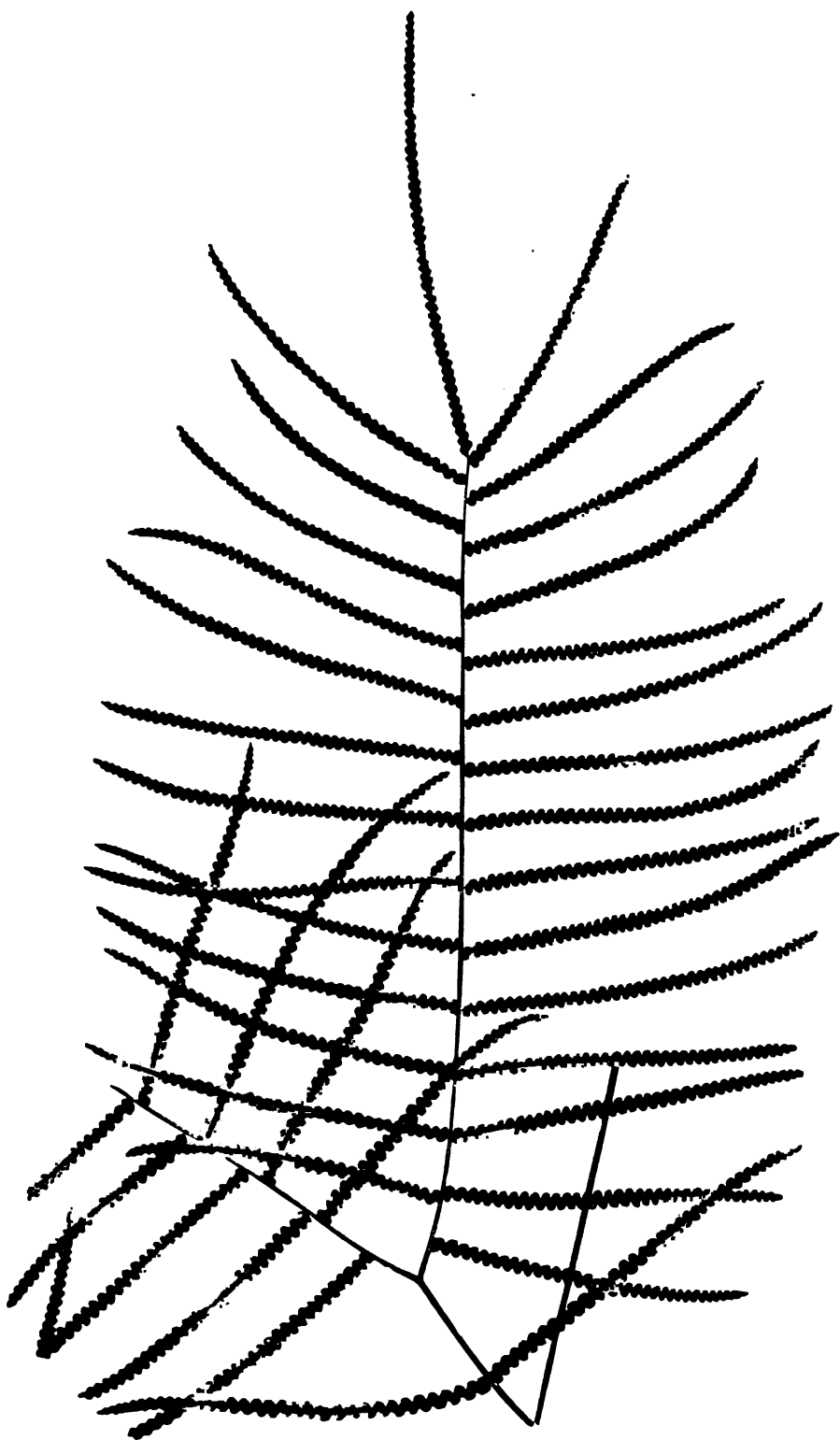
This species grows to the height of three or four feet, and is of a rich green colour.

For fronds my thanks are due to Mr. Smith, Curator of the Royal Gardens, Kew; Mr. Moore, of the Glasnevin Gardens; Mr. Sim, of Foot's Cray; Messrs. Rollisson, of Tooting; and Messrs. Veitch, of Chelsea.

It may be procured of Messrs. Veitch, of Chelsea; R. Sim, of Foot's Cray; and E. G. Henderson, of St. John's Wood.

The illustration is from Mr. Veitch's frond.





11

GLEICHENIA DICARPA.

ADULT-PLANT.

Digitized by Google





  
Pinna of mature Frond.

## GLEICHENIA DICARPA.

BROWN. HOOKER. MOORE. KUNZE. J. SMITH.

PLATE XLVIII. VOL. VIII.

*Gleichenia microphylla*,

SIEBER.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Dicarpa*—Bearing two crops.

A SOMEWHAT similar-looking elegant species to *Gleichenia hecistophylla*, yet smaller in size.

A warm greenhouse Fern.

Native of Tasmania.

Fronds dichotomous divaricated; branches pinnate, the pinnæ pinnatifid; segments very small and orbicular, with a broad recurved margin.

Branches nearly glabrous.

Rachis very hairy. Veins immersed and indistinct.

Sori terminal, situated at the apex of a veinlet, and consisting of two spore-cases, placed within the hollow of the segment, punctiform and naked.

This species attains the height of from twelve to eighteen inches.

For fronds my thanks are due to Mr. D. Moore, of the Glasnevin Gardens; Mr. J. Smith, of the Royal Gardens, Kew; Mr. Sim, of Foot's Cray; and Mr. Veitch, of Chelsea.

This species may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; and E. G. Henderson, of St. John's Wood.

The illustration is from fronds sent by Mr. Smith, of Kew.









100

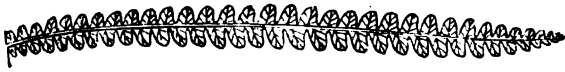
GLIICHEN A. SP. L. NO. 1.

N. L. X. 11. 8.

Digitized by Google







Pinna of mature Frond.

## GLEICHENIA SPELUNCÆ.

BROWN. HOOKER. MOORE. J. SMITH.  
(*Not of* GUILLEMIN.)

PLATE XLIX. VOL. VIII.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Speluncæ*—Of a cave.

A RARE, large-growing, splendid species, of compact habit, very distinct, and having pendent but not curving branches.

A warm greenhouse Fern.

Native of Port Jackson and New South Wales.

Fronds glabrous, simple or forked, dichotomous, pinnate, and usually about a foot in length, but varying considerably in size, and in the degree of ramification. Pinnæ pinnatifid, about an inch and a quarter in length, opposite below, alternate above, the segments being semiovate, plane, and membranous, not pouched, alternate, and usually from sixteen to twenty pairs.

Colour of fronds very pale green above, and very silvery or glaucous beneath.

Veins forked and indistinct.

This species grows to the height of from four to five feet.

Sori terminal, situated at the apex of a veinlet, punctiform, and naked.

For fronds my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. Moore, of the Glasnevin Gardens,

Dublin; Messrs. Rollisson, of Tooting; and Mr. Sim, of Foot's Cray.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; and E. G. Henderson, of St. John's Wood.

The illustration is from Mr. D. Moore's fronds.





117









Portion of fertile branch—under side.

## GLEICHENIA FLABELLATA.

BROWN. HOOKER. LABILLARDIERE. MOORE. J. SMITH.

PLATE L. VOL. VIII.

*Mertensia flabellata*,

J. SMITH.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Flabellata*—Fan-shaped.

### IN THE SECTION MERTENSIA OF AUTHORS.

AN exceedingly beautiful species, making a magnificent specimen. Habit erect, having an upright stipes, terminated by flabelliform fronds, consisting of several distinct series of two to four horizontal fan-shaped branches, and each again branching.

A warm greenhouse species.

Native of New Holland, Tasmania, New Caledonia, and New Zealand.

Introduced by Mr. R. Gunn, into the Royal Gardens, Kew, in 1845.

The fronds are two or three times dichotomous, proliferous, and flabelliform, the branches being lanceolate in form, ascending,

and caudate at the point; pinnatifid; below pinnate, the segments linear, acute, and serrated, mostly alternate below and opposite above.

Sori medial, consisting of from one to four spore-cases, punctiform, and naked.

Veins forked from a conspicuous midrib.

Stalks stout, dark, rising from stout, brown-scaled, fast-creeping stems.

The branches tapering, pendent, slenderly and profoundly cut, from six to nine inches in length, and about an inch wide.

Rhizoma creeping.

*Gleichenia flabellata* grows to the height of from four to five feet.

For a plant of this species my thanks are due to Mr. E. G. Henderson, of St. John's Wood; and for fronds to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. D. Moore, of the Glasnevin Gardens, near Dublin; Mr. Sim, of Foot's Cray; Messrs. Rollisson, of Tooting; and Mr. Veitch, of Chelsea.

The illustration is from fronds sent by Messrs. Veitch, of Chelsea.

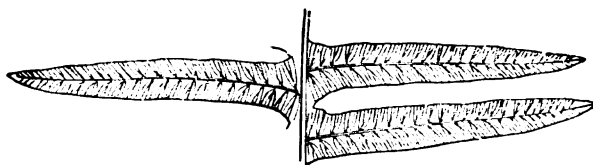




Digitized by Google







Portion of barren branch—under side.

## GLEICHENIA DICHOTOMA.

WILLDENOW. HOOKER. SCHKUHR. MARTIUS.  
LANGSDORFF AND FISCHER. SIEBER. MOORE. J. SMITH.

PLATE LI. VOL. VIII.

<i>Mertensia discolor,</i>	SCHRAEDER.
" <i>Sieberi,</i>	PRESL.
" <i>Hookeri,</i>	J. SMITH. RUMPHIUS.
" <i>flexuosa,</i>	MARTIUS.
" <i>pusilla,</i>	MARTIUS.
" <i>mucronata,</i>	REINWARDT.
" <i>dichotoma,</i>	WILLDENOW. SCHKUHR.
" "	LANGSDORFF AND FISCHER.
<i>Polypodium dichotomum,</i>	THUNBERG.
<i>Gleichenia lanigera,</i>	DON.
" <i>Hermanni,</i>	BROWN. ( <i>Not of HOOKER</i>
" <i>rigida,</i>	AND GREVILLE.)
<i>Sticherus laniger,</i>	J. SMITH.
	PRESL.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Dichotoma*—Divided into two.

### IN THE SECTION MERTENSIA OF AUTHORS.

A HANDSOME distinct species, varying considerably in different localities: strong-growing, with erect habit.

An evergreen stove Fern.



Native of the East Indies, Malay Islands, Nepal, Sylhet, Tenasserim, Singapore; China; Ceylon, Malabar, Philippine Islands, Assam, Pulo Penang, Mauritius, Java, Madagascar, Fernando Po, Brazil, Bahia, Islands of Tobago, and Trinidad.

The stipe, which is rounded and somewhat hirsute, bears ultimate branches, with a pair of pinnæ two inches and a half wide, and from six to twelve inches long, and another pair also at the base of the di-trichotomy, not of the frond. The pinnæ are lanceolate-acuminate and pinnatifid, the segments linear-obtuse or emarginate, the lower external ones usually the largest; apices rounded.

Sori consisting of from ten to twelve capsules, punctiform, and naked.

Fronde glabrous, glaucous beneath.

Veins branched.

Brownish stalks, rising from fast-creeping, stout, wiry stems.

Rhizoma creeping.

The variety known as *Mertensia mucronata* of Reinwardt, has very broad pinnæ, and a caudate apex: it is the *Gleichenia rigida* of J. Smith.

*Gleichenia dichotoma* attains a height of from five to six feet.

For a plant my thanks are due to Mr. Moore, of the Glasnevin Gardens, Dublin; and for fronds to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. Sim, of Foot's Cray; and Mr. Veitch, Jun., of the Exotic Nursery, Chelsea.

This species may be procured of Messrs. Veitch, Jun., of Chelsea; Mr. R. Sim, of Foot's Cray; and Mr. E. G. Henderson, of the Wellington Nursery.

The illustration is from fronds forwarded by Mr. J. Smith, of Kew.





111







Pinna of mature Frond—under side

## GLEICHENIA HECISTOPHYLLA.

A. CUNNINGHAM. HOOKER. MOORE.

PLATE LII. VOL. VIII.

*Gleichenia semivestita*,

J. SMITH. (*Not of* LABILLARDIERE,  
HOOKER, *or* MOORE.)

“ *dicarpa*,

OF SOME GARDENS. (*Not of* BROWN  
*or* HOOKER.)

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German  
botanist. *Hecistophylla*—Ivy-leaved.

THIS most graceful lovely Fern is of rapid growth, erect in habit, and slender.

A warm greenhouse species.

Native of New Zealand.

The fronds, which are dichotomous divaricated, (that is, growing in duplicate, the one branch receding from the other, and each again producing a similar growth of twin branches, and each branch once divided,) have branches from ten to fourteen inches long, and pectinate; the pinnæ a little distant, opposite or sub-opposite below, alternate above, about fifty pairs, very narrow, and from one to two inches and a half long, pinnatifid. Segments small, nearly circular in form, alternate, approximate, about thirty to forty-five pairs, and saccate; the outline of the pinnæ resembling that of a string

of small beads of equal size, and not larger than the size of a small pin's head, closely strung together.

Veins immersed and indistinct.

The branches and rachis densely covered with a ferruginous pubescence.

The sori, which are situated at the apex of a veinlet, (terminal,) consist of two capsules or spore-cases, sunk in the hollow of the segments, punctiform and naked.

The stalks dark, rising abundantly from the many wiry fast-creeping stems, and having at intervals weeping, curving-branched, smooth, shining, deep green fronds.

*Gleichenia hecistophylla* grows to the height of from two to three feet.

For fronds my thanks are due to Mr. R. Sim, of Foot's Cray.

It may be procured of Messrs. Sim, of Foot's Cray, and Veitch, of Chelsea.

The illustration is from Mr. Sim's frond.







100







Pinna of mature Frond—under side.

## GLEICHENIA RUPESTRIS.

BROWN. HOOKER. MOORE.

PLATE LIII. VOL. VIII.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Rupestris*—Rock.

AN exceedingly rare and very handsome species, being glaucous on the under side of the branches.

A warm greenhouse Fern.

Native of New South Wales and Port Jackson.

Fronds glabrous, forked or dichotomous, the branches pinnate; the pinnæ wide, being pinnatifid, and having rounded coriaceous segments, with thickened recurved margins.

Colour pale green above, glaucous beneath.

Veins branched, immersed, but plainly visible.

Stems somewhat plum-coloured.

Sori terminal, situated at the apex of a veinlet, composed of three or four exserted capsules or spore-cases, punctiform, and naked.

*Gleichenia rupestris* attains a height of from four to six feet.

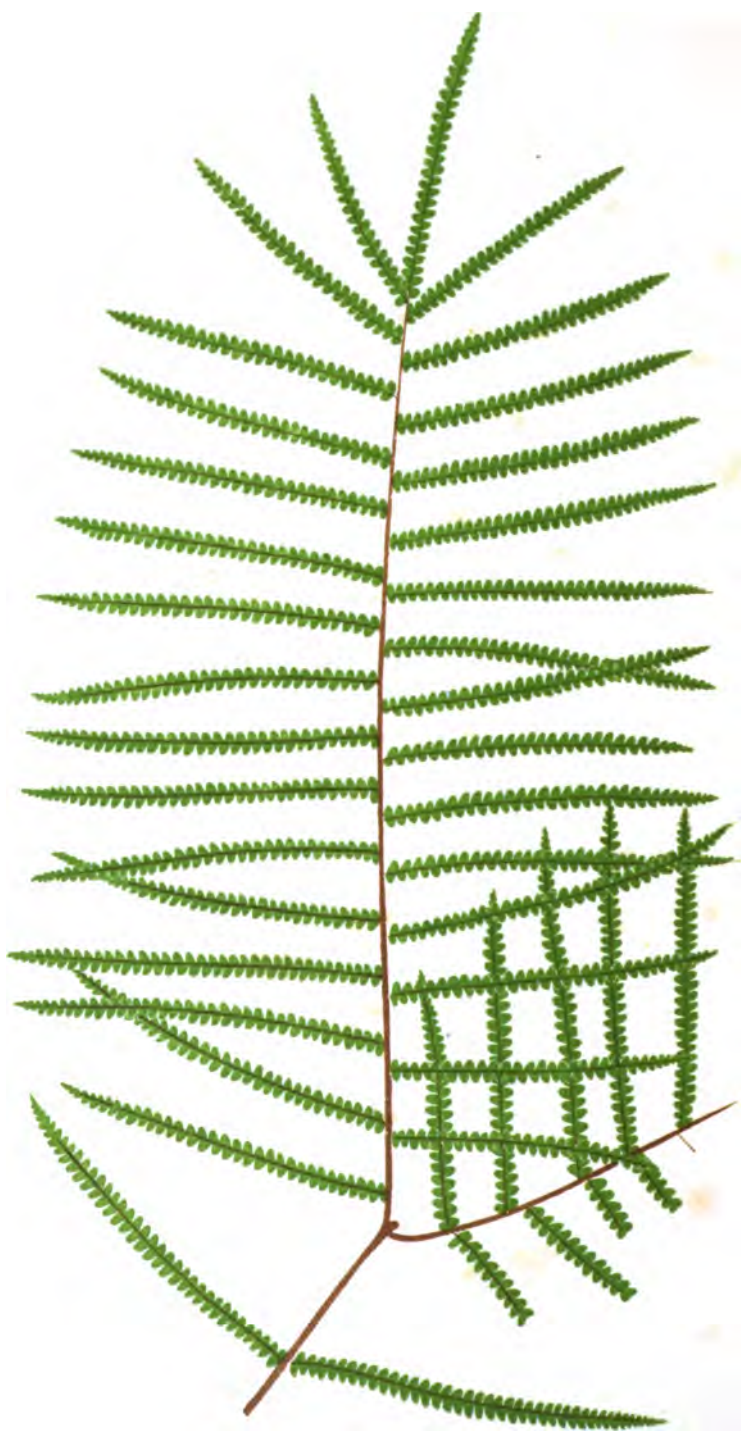
For fronds my thanks are due to Mr. R. Sim, of Foot's Cray.

It seems only to be in Mr. Sim's Catalogue.

The illustration is from fronds sent by Mr. R. Sim.





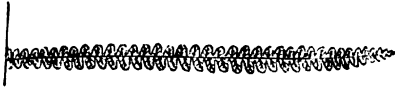


101









Pinna of mature Frond—under side.

## GLEICHENIA SEMIVESTITA.

LABILLARDIERE. HOOKER. MOORE.

PLATE LIV. VOL. VIII.

*Gleichenia*—Named in honour of Baron P. F. Von Gleichen, a German botanist. *Semivestita*—Half-clothed.

A HANDSOME rare species, with a close habit, and growing very erect; branches spreading. Not unlike *Gleichenia microphylla*.

A warm greenhouse species.

Native of New Caledonia and Malacca.

The fronds are dichotomous divaricated, the branches being pectinate, the pinnæ pinnatifid, and the segments small, orbicular-ovate, and slightly concave. The pinnæ tapering regularly to their points; the lobes not pouched beneath.

Veins pinnate.

Rachis having a few stellated hairs.

Branches ferruginous, with a dense pubescence.

Veins indistinct.

Sori terminal, of three or four exserted deciduous capsules or spore-cases, situated at the apex of a veinlet, punctiform, and naked.

This species grows to the height of from two to four feet; the branches being of a very shining deep green colour.

For fronds my thanks are due to Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. Sim.

The illustration is from Mr. Sim's fronds.



## CYATHEÆ. J. SMITH.

WITH circular intramarginal sori, the sporangia usually sessile, and situated on an elevated receptacle, and having a special indusium.

Comprising in Mr. Smith's "Catalogue of Ferns," *Cyathea*, *Hemitelia*, *Alsophila*, and *Lophosoria*, the latter genus being included in *Alsophila* by Sir W. J. Hooker.

## GENUS I.

## CYATHEA.

HABIT erect and arborescent, the trunk or caudex reaching in some species a height of from forty to fifty feet, the fronds being from five to fifteen feet in length.

Veins forked; venules free. Sori globose, axillary at the forking of a vein, or medial. Receptacle elevated and columnar.

Indusium globose, membranaceous, complete cup-shaped, and at first covering the whole sorus.

Inhabiting warm countries.

Sir W. J. Hooker, in his "Species Filicum," describes—

Sinuata, <i>Hooker and Greville</i> ,	Beyrichiana, <i>Presl</i> , Brazil.
Ceylon.	Canaliculata, <i>Willdenow</i> , Isle of
Brunonis, <i>Wallich</i> , Penang.	France.
Mexicana, <i>Schlechtendal</i> , Mexico	Excelsa, <i>Swartz</i> , Bourbon.
Arborea, <i>Smith</i> , Jamaica.	Walkeræ, <i>Hooker</i> , Ceylon.
Serra, <i>Willdenow</i> , Caraccas.	Aspera, <i>Swartz</i> , Jamaica.
Imrayana, <i>Hooker</i> , Dominica.	Aculeata, <i>Willdenow</i> , Hispaniola
Muricata, <i>Willdenow</i> , Martinique	Cuspidata, <i>Kunze</i> , Peru.
Schanschin, <i>Martius</i> , Brazil.	Divergens, <i>Kunze</i> , Peru.
Gardneri, <i>Hooker</i> , Brazil.	Equestris, <i>Kunze</i> , Peru.

Vestita, *Martius*, Brazil.  
 Hirtula, *Martius*, Brazil.  
 Grevilleana, *Martius*, Jamaica.  
 Dregei, *Kunze*, S. Africa.  
 Burkei, *Hooker*, S. Africa.  
 Spinulosa, *Wallich*, Nepal.  
 Glauca, *Bory*, Bourbon.  
 Crenulata, *Blume*, Java.  
 Javanica, *Blume*, Java.  
 ? Celebica, *Blume*, Celebes.  
 Integra, *J. Smith*, Amboyna.  
 Medullaris, *Swartz*, N. Zealand.  
 Dealbata, *Swartz*, N. Zealand.

## DOUBTFUL SPECIES.

? Rumphii, *Desvauz*.  
 ? Lævigata, *Willdenow*, Madagascar.  
 ? Marattioides, *Willdenow*, Madagascar.  
 Delgadii, *Pohl*, Brazil.  
 Sternbergii, *Pohl*, Brazil.  
 Tussacii, *Desvauz*, Jamaica.  
 Polypodioides, *Swartz*, Brazil.  
 Woodwardioides, *Kaulfuss*.  
 Sellowiana, *Presl*, Brazil.

Mr. J. Smith, in his Catalogue of the Ferns cultivated in the Royal Gardens, Kew, mentions—

Canaliculata, *Willdenow*.  
 Excelsa, *Swartz*.  
 Arborea, *Smith*.  
 Serra, *Willdenow*.

Medullaris, *Swartz*.  
 Aculeata, *Willdenow*.  
 Dealbata, *Swartz*.

There is so much difference of opinion amongst Botanists regarding *Alsophila*, *Cyathea*, and *Hemitelia*, that different Authors place them in a different genus; thus the *Hemitelia Hostmanni* of Hooker is *Alsophila Hostmanni* of Smith, and the *Hemitelia horrida* of R. Brown is the *Cyathea horrida* of Smith. Mr. Moore places many of them in *Alsophila* and *Amphicosmia*; perhaps some day they will all be united in one genus.













Pinnule of mature Frond.—under side.

## CYATHEA CANALICULATA.

WILLDENOW. HOOKER. J. SMITH. SPRENGEL.

PLATE LV. VOL. VIII.

*Cyathea Borbonica*,  
 “ *Mascarena*,  
 “ *melanocaula*,

POIRET.  
 SWARTZ.  
 DESVAUX.

*Cyathea*—A little cup, (the form of the indusium.)  
*Canaliculata*—Channelled.

THIS magnificent rare species is very distinct, and of large size, the pinnules being usually from eight to ten inches long, and two inches and a half wide, and in the variety *Latifolia* much larger.

A warm greenhouse evergreen species.

Native of Madagascar, Mauritius, and Isles of France and Bourbon.

Fronde bipinnate, coriaceous, the pinnules glabrous, of large size, and broadly lanceolate in form; profoundly pinnatifid, the ultimate pinnules linear-oblong and serrated.

Veins twice or three times forked.

Sori situated at some distance from the costa, but occupying most of the segment.

Indusium membranaceous, but durable.

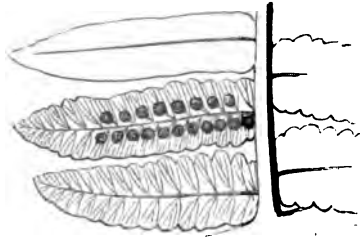
The caudex is shorter, and the frond broader and thicker than *Cyathea excelsa*.

There are several varieties; one having a very dark coloured rachis; and another, known as var. *Latifolia*, having its pinnules twelve inches in length, and three inches in breadth, and being pinnated almost to the apex.

For fronds my thanks are due to Mr. James Veitch, Jun., of the Exotic Nursery, Chelsea.

It may be procured of Messrs. Veitch, of Chelsea.

The illustration is from Mr. Veitch's frond.



Variety *Latifolia*.





101

CYATHEA RHEDSII (L.) G. & C. N. S. P. <sup>Digitized by Google</sup>  
 IV. 11. 8.





10

CYATHEA ENIMBLE-CLORTON CI. CHINA.

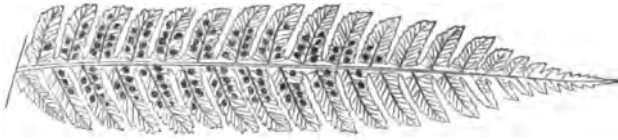
1161. 1888.

Digitized by Google









Pinnule of fertile Frond - under side.

## CYATHEA EXCELSA.

SWARTZ. HOOKER. J. SMITH.

PLATE LVI. VOL. VIII.

*Cyathea arborea*, BOBY, (*Not of SMITH, SWARTZ, nor HOOKER.*)

*Cyathea*—A little cup, (the form of the indusium.) *Excelsa*—Tall.

ANOTHER rare species, not in ordinary collections.

An evergreen stove Fern.

Native of Mauritius and Bourbon.

The fronds, which are bipinnate, are glabrous, and somewhat membranaceous; pinnules lanceolate, and much drawn out to a point; pinnatifid, with segments oblong and serrated.

Veins simply forked below the middle.

Stipes and rachis pale.

Sori situated near the costa. Indusium membranaceous, shining, and very fragile.

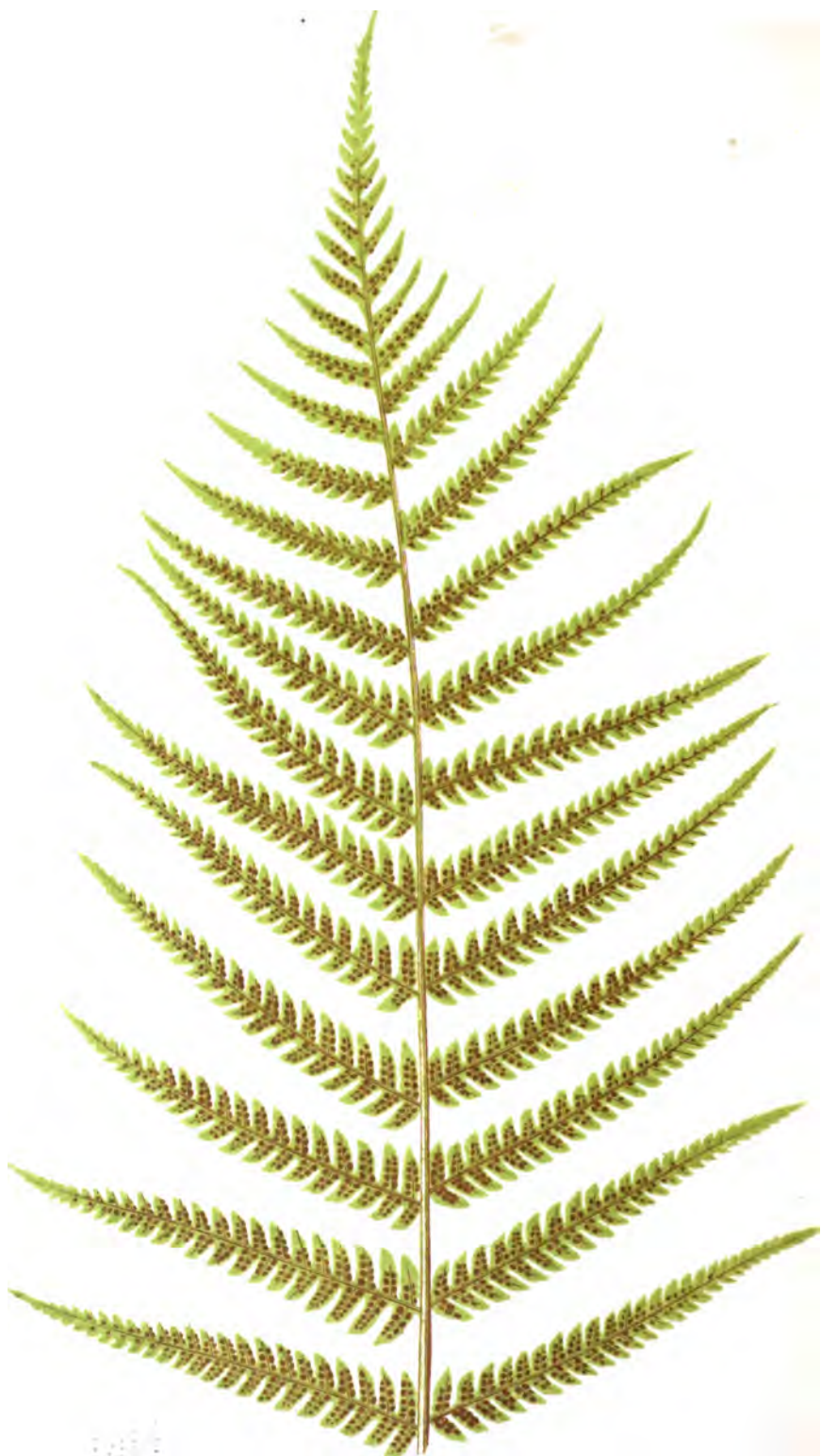
I am under an obligation to Mr. Joseph Henderson, of Wentworth, for pinnæ of this species.

It does not appear to be included in any of the Nurserymen's Catalogues.

The illustration is from a pinna sent by Mr. Joseph Henderson.













Pinnule of fertile Frond--under side.

## CYATHEA MEDULLARIS.

SWARTZ. SCHKUHR. J. SMITH. HOOKER.

PLATE LVII. VOL. VIII.

<i>Polypodium medullare,</i>	FORSTER.
“ <i>affine,</i>	FORSTER.
<i>Sphaopteris medullaris,</i>	BERNHARDI.
<i>Cyathea affinis,</i>	SWARTZ, ( <i>Not of</i> SCHKUHR.)
“ <i>extensa,</i>	SWARTZ. SCHKUHR.
<i>Alsophila</i> “	DESAUX. HOOKER & ARNOTT.
<i>Cyathea Mertensiana,</i>	BONGARD.

*Cyathea*—A little cup, (the form of the indusium.)      *Medullaris*—Pithy.

A MAGNIFICENT rare Fern, very distinct. In New Zealand it forms a common article of food for the natives.

An evergreen warm greenhouse species.

Native of New Zealand, Norfolk Island, Pacific Islands, New Guinea, and Otaheite.

The fronds are bi-tripinnate, glabrous, and coriaceous. The pinnules broadly-lanceolate, acuminate, and attenuated, mostly sub-opposite or alternate; profoundly pinnatifid, sessile, with few small scales beneath. Segments linear-oblong and serrated, those next the rachis pinnatifid.

Sori very copious, occupying a lobe, and nearly as broad as the space between the costa and the margin; orange-yellow in colour. Indusium circular, shining, and membranaceous.



Stipes and rachis muricated with glandular hard tubercles, glossy, and resembling a dried resinous exudation.

Length of frond from six to ten feet; colour vivid light green.

There are several varieties:—

Variety *tripinnata* having entire pinnules, and again pinnated, except at the apex. It was found in the Coral Islands, by Captain Beechey, and at Bonin, by Dr. Mertens.

Variety *integra* having its segments nearly entire. Found by Colenso in New Zealand.

For fronds I am indebted to Mr. James Veitch, Jun., of the Exotic Nursery, Chelsea.

It may be procured of Messrs. Veitch, of Chelsea, and Sim, of Foot's Cray.

The illustration is from a frond sent by Mr. James Veitch.



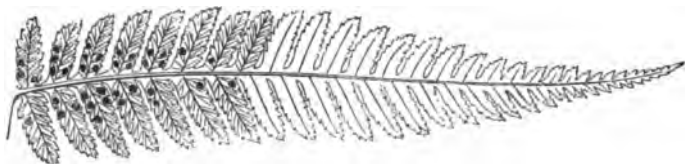


111

ADANTUM DELEBATA.—POLIUM OF PINN. Google  
 1711—Vol. 1.







Pinnule of fertile Frond—under side.

## CYATHEA DEALBATA.

SWARTZ. RICHARD. J. SMITH. MOORE AND HOULSTON.

PLATE LVIII. VOL. VIII.

*Cyathea*—A little cup, (the form of the indusium.) *Dealbata*—Whitened.

PERHAPS the present species is the handsomest Fern as yet introduced into Great Britain. Rising on a trunk to the height of from ten to fifteen feet, it is crowned above with a splendid tuft of fronds, which are pure white beneath from the copious glaucous farina. We have recently mentioned the King of Ferns, and *Cyathea dealbata* may aptly be called 'the Silver-King.'

Mr. Edgerly mentions that, like *C. medullaris*, this Fern is an article of food with the natives of New Zealand.

*C. dealbata* is easily cultivated, and should be grown in every collection where room can be given it to expand its beautiful silvery-powdered fronds.

The sori is another feature of beauty, being reddish brown, and dotted amongst the white powder of the under surface, it is a conspicuous object.

It is only to be met with in a few of our best collections, and there it is universally admired, for it is a noble species, graceful in habit, and remarkable in foliage.

An evergreen warm greenhouse Fern.

VOL. VIII.

Z

Native of the northern and middle islands of New Zealand.

The fronds, which are bipinnate, and sometimes again pinnate at the base, are glabrous, and somewhat lanceolate in form; pinnules narrow, lanceolate, acuminate, and profoundly pinnatifid; segments falcate and serrated.

Stipes scaly and muricate, and more especially so at the base; rachis covered with ferruginous deciduous down.

Fronds terminal, adherent to an erect caudex or trunk.

Veins pinnate; venules direct and free.

Sori copious, placed midway between the costa and the margin; involucre globose, membranaceous, and rising from a raised receptacle.

Length of frond from five to seven feet; colour a bluish green above, and very glaucous beneath.

Humboldt, in his "Views of Nature," mentions that "Ernst Dieffenbach saw in the most northern of the three islands of New Zealand, trunks of *Cyathea dealbata* rising to the height of forty-two feet and a half."

For fronds my thanks are due to Mr. Joseph Henderson, of Wentworth; Mr. J. Veitch, Jun., of Chelsea; Mr. Smith, of the Royal Gardens, Kew; Mr. Moore, of the Glasnevin Gardens, Dublin; and Mr. Sim, of Foot's Cray.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood; Messrs. Veitch, of the Exotic Nursery, Chelsea; Sim, of Foot's Cray; and Stansfield, of Todmorden.

The illustration is from Mr. Joseph Henderson's fronds.

## GENUS II.

## HEMITELIA. BROWN.

HABIT erect and arborescent. Fronds large—four to eight feet long. Veins simply or pinnately forked; venules free, the lowest mostly angularly anastomosing, and forming a costal arch. Sori solitary, globose, and medial, or axillary. Receptacle elevated and globose. Indusium semicircular and concave. *Cyathea* is known by the complete cup-shaped involucre; whilst *Hemitelia* is recognised by its half cup-shaped involucre, and its arcuately-anastomosed basal venules.

All natives of the Tropics.

Sir W. J. Hooker, in his "Species Filicum," describes—

*Speciosa*, *Kaulfuss*, Caraccas.  
 ? *Alternans*, *Hooker*, Penang.  
*Obtusa*, *Kaulfuss*, West Indies.  
*Grandifolia*, *Sprengel*, Martinique.  
 ? *Parkeri*, *Hooker*, Guiana.  
*Imrayana*, *Hooker*, Dominica.  
*Horrida*, *Brown*, St. Domingo.  
*Petiolata*, *Hooker*, Panama.  
*Hostmanni*, *Hooker*, Guiana.  
*Multiflora*, *Brown*, Jamaica.  
*Guianensis*, *Hooker*, Guiana.

## DOUBTFUL SPECIES.

*Munita*, *Presl*.  
*Serrata*, *J. Smith*.  
*Stigmosa*, *Desvauz*, Tropical America.  
*Cyathoides*, *Desvauz*, Guiana.  
*Monilifera*, *J. Smith*.  
*Cruciata*, *Desvauz*, Tropical America.  
*Cordata*, *Desvauz*, Madagascar.  
*Laciniata*, *Sprengel*, N. Hebrides.

Mr. J. Smith, in his "Catalogue of the Ferns of Kew," enumerates—

*Speciosa*, *Kaulfuss*.  
*Grandifolia*, *Sprengel*.  
*Horrida*, *R. Brown*.

*Hostmanni*, *J. Smith*, (under Genus *Alsophila*.)













24

*HEPATELLA GRANIFOLIA*.—PINNA.  
LIN—VOL. 8.







Portion of mature Frond—under side.

## HEMITELIA GRANDIFOLIA.

SPRENGEL. HOOKER. J. SMITH. MOORE AND HOULSTON.

PLATE LIX. VOL. VIII.

*Cyathea grandifolia*,  
 " *horrida*,  
*Cnemidaria Kohautiana*,

WILLDENOW. PLUMIER.  
 SIEBER, (*Not of* PRESL & SMITH.)  
 PRESL.

*Hemitelia*—Half-perfect, in reference to the indusium resembling a half-cup.

*Grandifolia*—Large-leaved.

THIS is a very beautiful Fern, but rare in collections.

An evergreen stove species.

Native of Trinidad, Jamaica, Martinique, and St. Vincent.

Caudex erect, growing to the height of four or five feet.

Fronds pinnate, glabrous, and ovate-lanceolate in form; pinnæ large, (twelve inches in length,) lanceolate-acuminate, sessile, and pinnatifid for above two-thirds of its length; segments obtuse and sub-falcate, apex serrulated.

Fronds terminal.

Veins once or twice forked, the basal ones angularly-anastomosing.

Stipes aculeated, having a scale on each prickle.

Sori a little within the margin, uniserial, continued around every sinuosity of the pinnæ, and having a solitary sorus on each venule.



Fronds from seven to eight feet in length; colour bright shining green.

For fronds I am indebted to Mr. Joseph Henderson, of Wentworth House.

It does not appear in any of the Nurserymen's Catalogues.

The illustration is from Mr. J. Henderson's frond.





10

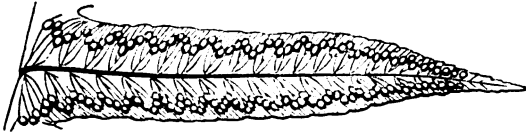
ADANTUM FLORIDA—FINRA.

LN-VOL. S.

Digitized by Google







Pinnule of fertile Frond.--under side.

## HEMITELIA HORRIDA.

R. BROWN. HOOKER. J. SMITH. MOORE AND HOULSTON.

PLATE I.X. VOL. VIII.

*Polypodium horridum*,

*Cyathea horrida*,

" *commutata*,

LINNÆUS. PLUMIER.

J. SMITH. PRESL, (*Not of* SIEBER.)

SPRENGEL, (*Not of* PLUMIER.)

*Hemitelia*—Half-perfect, in reference to the indusium resembling a half-cup.

*Horrida*—Horrid.

A NOBLE species, of large size, and only to be seen in good collections.

An evergreen stove Fern.

Native of Jamaica, Trinidad, St. Domingo, Martinique, and St. Vincent.

Introduced into the Royal Gardens, Kew, in 1843, having been received from Mr. Purdie.

The fronds, which are glabrous, are bipinnate, broadly lanceolate in form, and are covered beneath at first, as well as the rachis, with cobwebby tomentum. Pinnæ sessile, profoundly pinnatifid, almost to the base; segments approximate, lanceolate, acuminate, and somewhat falcate; apex crenate-serrate.

Rachis and stipes aculeate, having a scale on each prickle.

Fronds terminal, and adherent to an erect arborescent caudex.

Veins pinnate, lower veinlets anastomosing, and forming an

angular costal arch, with others between the base and midrib of the segments.

Sori continuous round every sinuosity of the pinnæ, forming a double line.

Pinnules of great size, from twelve to eighteen inches in length, and sessile.

Length of frond from five to ten feet; colour bright shining green.

For fronds I am indebted to Mr. Joseph Henderson, of Wentworth; Mr. Norman, of Hull; and Mr. Smith, of the Royal Gardens, Kew.

It may be procured of Messrs. Rollisson, of Tooting; Veitch, of Chelsea; Sim, of Foot's Cray; and A. Henderson, of Pine-apple Place Nursery.

The illustration is from Mr. Joseph Henderson's frond.













Pinnule of fertile Frond -under side.

## HEMITELIA HOSTMANNI.

HOOKER. FEE. KUNZE. PRESL.

PLATE LXI. VOL. VIII.

*Alsophila Hostmanni*,  
 " ? *Leprieuriana*,  
*Amphicosmia Hostmanni*,  
*Hemitelia surinamensis*,  
*Cyathea aspera*,

J. SMITH.  
 KUNZE.  
 MOORE.  
 MIQUEL.  
 KLOTZSCH.

*Hemitelia*—Half-perfect, in reference to the indusium resembling a half-cup.

*Hostmanni*—Named after Dr. Hostmann.

AN ornamental and very rare Fern, only found in our best collections.

An evergreen stove species.

Native of Dutch Guiana, where it was found by Dr. Hostmann.

Introduced into the Royal Gardens, Kew, in 1845, by Mr. H. Cadogan Rothery.

Fronds bipinnate, glabrous, and lanceolate, pinnæ remote, the largest a foot in length; sessile, broad lanceolate, pinnules pin-natifid, oblong, sessile, and obtuse, the base being wedge-shaped; segments or lobes entire, obtuse, sub-falcate, with a rounded apex, the upper ones decurrent at the base, forming a winged rachis.

Veins simple; venules free.

Sori medial and distant, only the lowest pair of veinlets bearing a solitary sorus.

VOL. VIII.

2 A

Stipes and main rachis scaly, the base of the stipes being very scaly, and aculeated; stipes rich mahogany brown in colour, and about eighteen to twenty inches in length, one side being thickly covered with long dark brown scales, and on the other muricated with short aculei.

Length of frond from sixty to eighty-four inches; colour deep green.

For fronds my obligations are due to Mr. Joseph Henderson, of Wentworth.

It does not appear in any of the Nurserymen's Catalogues. The illustration is from Mr. J. Henderson's frond.

## GENUS III.

## ALSOPHILA. R. BROWN.

HABIT erect and arborescent.

Fronds bi-tripinnatifid, growing to the length of from five to fifteen feet. Veins simple or forked, and free. Sori globose, axillare, or medial. Receptacle elevated, often villous. Indusium frequently obsolete, or perhaps none.

Sir W. J. Hooker, in his "Species Filicum," enumerates the following:—

Blechnoides, *Hooker*, Guiana.  
 Tænitis, *Hooker*, Brazil.  
 Elegans, *Martius*, Brazil.  
 Capensis, *J. Smith*, Cape of Good Hope.  
 Latebrosa, *Wallich*, Penang.  
 Miersii, *Hooker*, Organ Mountains.  
 Procera, *Kaulfuss*, Brazil.  
 Hookeriana, *Klotzsch*, Brazil.  
 Armigera, *Kunze*, Ventanilla de Cassapi.  
 Aspera, *Brown*, Martinique.  
 Armata, *Presl*, Jamaica.  
 Gardneri, *Hooker*, Brazil.  
 Ferox, *Presl*, Brazil.  
 Leucolepis, *Martius*, Brazil.  
 Phalerata, *Martius*, Brazil.  
 Infesta, *Kunze*, Peru.  
 Compta, *Martius*, Brazil.  
 Elongata, *Hooker*, Columbia.  
 Pœppigii, *Hooker*, Peru.  
 Villosa, *Presl*, Caraccas.

Plagiopteris, *Martius*, Brazil.  
 Paleolata, *Martius*, Brazil.  
 Hirsuta, *Kaulfuss*, Brazil.  
 Rigidula, *Martius*, Brazil.  
 Nigra, *Martius*, Brazil.  
 Monticola, *Martius*, Brazil.  
 Sprengeliana, *Martius*, San Domingo.  
 Atrovirens, *Presl*, Brazil.  
 Radens, *Kaulfuss*, Brazil.  
 Setosa, *Kaulfuss*, Brazil.  
 Pycnocarpa, *Kunze*, Peru.  
 Subaculeata, *Splitgerber*, Surinam.  
 Pilosa, *Martius*, Mexico.  
 Mexicana, *Martius*, Mexico.  
 Pruinata, *Kaulfuss*, Jamaica.  
 Excelsa, *Brown*, Norfolk Island.  
 Lunulata, *Brown*, South Sea Islands.  
 Australis, *Brown*, N. S. Wales.  
 Decurrens, *Hooker*, South Sea Islands.  
 Glabra, *Blume*, Java.

Squamulata, *Blume*, Java.  
 Contaminans, *Wallich*, Penang.  
 Caudata, *J. Smith*, Manilla.  
 Brunoniana, *Wallich*, Sylhet.  
 Gigantea, *Wallich*, Sylhet.  
 Comosa, *Wallich*, Singapore.  
 Crinita, *Hooker*, Ceylon.  
 Lepifera, *J. Smith*, South Cam-  
   arines.  
 Tomentosa, *Blume*, Java.  
 Lurida, *Blume*, Java.  
 Hænkei, *Presl*, Marianne Islands

## DOUBTFUL SPECIES.

Dombeyi, *Desvauz*, Peru.  
 Millefolium, *Desvauz*, Hispaniola  
 Schiedeana, *Presl*, Mexico.  
 Martinicensis, *Sprengel*, Mar-  
   tinique.  
 Aculeata, *J. Smith*, Trinidad.

Speciosa, *Presl*, South America.  
 Strigosa, *J. Smith*, British Guiana  
 (perhaps *Hemitelia Hostmanni*)  
 Serrata, *J. Smith*, Jamaica, (con-  
   sidered a var. of *A. aspersa*.)  
 Tumacensis, *J. Smith*, (is *A.*  
   elongata of *Hooker*.)  
 Lævis, *J. Smith*, (is *Hemitelia*  
   Guianensis, *Hooker*.)  
 Tenera, *J. Smith*, St. Vincent,  
   (is a *Cyathea*.)  
 Brevis, *J. Smith*, (is a *Polypo-*  
   dium, according to Mr. Smith.)  
 Manillensis, *Presl*, East Indies.  
 Wallichiana, *Presl*, Sylhet.  
 Glaucescens, *Wallich*, Sylhet.  
 Grevilleana, *Wallich*, Sylhet.  
 Telfairiana, *Wallich*, Mauritius.  
 Wiegeltii, *Roemer*.

*Alsophila Perinniana*, *Sprengel*, is *Woodsia Perinniana*, of *Hooker and Greville*.

Mr. Smith, in his "Catalogue of the Ferns cultivated at Kew," enumerates—

Capensis, *J. Smith*.  
 Hostmanni, *J. Smith*, (*Hemitelia*  
   Hostmanni, of *Hooker*.)

Aspera, *R. Brown*.  
 Australis, *R. Brown*.  
 Radens, *Kaulfuss*.

Mr. Moore, in his "Index Filicum," gives under *Alsophila*,—

Aculeata, *J. Smith*.  
 Arbuscula, *Presl*.  
 Armata, *Presl*.  
 Adpersa, *Kaulfuss*.  
 Armigera, *Kunze*.  
 Aspera, *R. Brown*.  
 Atrovirens, *Presl*.  
 Aurca, *Fee*.  
 Australis, *R. Brown*.  
 Axillaris, *Moore*.  
 Blanchetiana, *Presl*.

Brevis, *J. Smith*.  
 Brunoniana, *Wallich*.  
 Caudata, *J. Smith*.  
 Colensoi, *Hooker*.  
 Comosa, *Wallich*.  
 Cordata, *Klotzsch*.  
 Crenata, *Kunze*.  
 Crinita, *Hooker*.  
 Decurrens, *Hooker*.  
 Dombeyi, *Desvauz*.  
 Echinata, *Moore*.

*Elegans, Martius.*  
*Elongata, Hooker.*  
*Erubescens, Kunze.*  
*Excelsa, R. Brown.*  
*? Finlaysonian, Wallich.*  
*Gardneri, Hooker.*  
*Glabra, Hooker.*  
*Glauc, J. Smith.*  
*Glaucescens, Wallich.*  
*Hænkei, Presl.*  
*Hirta, Kaulfuss.*  
*Hookeriana, Klotzsch.*  
*Humboldtii, Klotzsch.*  
*Infesta, Kunze.*  
*Junghuhniana, Kunze.*  
*Læta, Kunze.*  
*Lanuginosa, Presl.*  
*Latebrosa, Wallich.*  
*Lepifera, J. Smith.*  
*Leschenaultiana, Moore.*  
*Leucolepis, Martius.*  
*Loddigesii, Kunze.*  
*Lunulata, R. Brown.*  
*Lurida, Hooker.*  
*Marginalis, Klotzsch.*  
*Melanopus, Hsskl.*  
*Mertensiana, Kunze.*  
*Mexicana, Martius.*  
*Microdonta, Desvauz.*  
*Microphylla, Klotzsch.*  
*Miersii, Hooker.*  
*Millefolia, Desvauz.*  
*Miquelii, Kunze.*  
*Mollissima, Moore.*  
*Myosuroides, Liebm.ann.*  
*Nigra, Martius.*  
*Oblonga, Klotzsch.*  
*Obtusa, Klotzsch.*  
*Oligocarpa, Fee.*  
*Oligosora, Miquel.*

*Paleolata, Martius.*  
*Pauciflora, Presl.*  
*Peruviana, Klotzsch.*  
*Phalerata, Martius.*  
*Plagiopteris, Martius.*  
*Platyphylla, Presl.*  
*Podophylla, Hooker.*  
*Pœppigii, Hooker.*  
*Polycampta, Kunze.*  
*Procera, Kaulfuss.*  
*Pruinata, Kaulfuss.*  
*Pungens, Kaulfuss.*  
*Pycnocarpa, Kunze.*  
*Radens, Kaulfuss.*  
*Samoensis, Brackenridge.*  
*Schaffneriana, Fee.*  
*Schiedeana, Presl.*  
*Senilis, Klotzsch.*  
*Setosa, Kaulfuss.*  
*Speciosa, Presl.*  
*Sprengeliana, Martius.*  
*Squamulata, Hooker.*  
*Subaculeata, Splitgerber.*  
*Tænitis, Kunze.*  
*Tenuisecta, Blume.*  
*Tomentosa, Endlicher.*  
*Tristis, Blume.*  
*Truncata, Brackenridge.*  
*Vestita, Presl.*  
*Villosa, Desvauz.*  
*Weigeltii, Roemer.*

---

UNDER AMPHICOSMIA.

*Alternans, Moore.*  
*Australis, Moore.*  
*Beyrichiana, Moore.*  
*Capensis, Moore.*  
*Cumingii, Moore.*  
*Hostmanni, Moore.*



*Javanica*, *Moore*.  
*Kegelii*, *Moore*.  
*Lævis*, *Moore*.  
*Lingulata*, *Moore*.  
*Macrocarpa*, *Moore*.  
*Manilensis*, *Moore*.  
*Multiflora*, *Gardner*.  
*Nigricans*, *Moore*.

*Parkeri*, *Moore*.  
*Strigosa*, *Moore*.  
*Tahitensis*, *Moore*.  
*Urolepis*, *Moore*.  
*Walkeræ*, *Moore*.

## UNDER AMPHIDESMIUM.

*Blechnoides*, *Klotzsch*.





ALSOPHILA CAPENSIS.—PINNA. Digitized by Google  
LXII—VOL. 8.







Portion of fertile Frond—under side.

## ALSOPHILA CAPENSIS.

J. SMITH. HOOKER. KUNZE. MOORE AND HOULSTON.

PLATE LXII. VOL. VIII.

<i>Polypodium capense</i> ,	LINNEUS.
<i>Hemitelia capensis</i> ,	R. BROWN. HOOKER. PRESL. FEE.
“ “	MARTIUS. KAULFUSS. SPRENGEL.
“ “	DESVAUX. SCHLECHTENDAL. KUNZE.
“ “	BLUME. METTENIUS.
“ <i>brasiliensis</i> ,	GARDNER.
“ <i>Gardneriana</i> ,	PRESL.
“ <i>riparia</i> ,	DESVAUX.
<i>Cyathea riparia</i> ,	WILLDENOW.
“ <i>capensis</i> ,	SMITH.
“ <i>monosorata</i> ,	WILLDENOW.
“ <i>polypodioides</i> ,	SWARTZ. SPRENGEL. HOOKER.
<i>Aspidium capense</i> ,	SWARTZ. DESVAUX.
<i>Amphicosmia riparia</i> ,	GARDNER.
“ <i>capensis</i> ,	MOORE.
<i>Cormophyllum capensis</i> ,	NEWMAN.
<i>Trichomanes? cormophyllum</i> ,	KAULFUSS.

*Alsophila*—From *also*—a grove, and *philos*—to live, alluding to the habitat of the Ferns. *Capensis*—Cape of Good Hope.

A HANDSOME, large, and arborescent Fern, not found in ordinary collections; and in its native countries growing in moist, watery places, and in mountain ravines.

An evergreen stove species.

Native of the Cape of Good Hope, Java, Brazil, and Organ Mountains.

Introduced into the Royal Gardens, Kew, in 1845, by Mr. Zeyher.

The fronds, which are glabrous, are ovate-lanceolate in form, and triplicato-pinnate; pinnæ lanceolate, acuminate, profoundly pinnatifid, (almost to the base;) segments acute, falcate, membranaceous, and serrated.

Stipes scaly at the base; rachis sparingly scaly.

Fronds terminal, adherent to an erect arborescent caudex, which rises to the height of twelve or fourteen feet.

Veins usually simple, in rare cases forked; and dark coloured.

Sori cylindrical, much elevated, mostly solitary, and situated at the base of the lowest vein on the upper part of the segment.

Length of frond from forty to forty-five inches; colour light green.

Very frequently the pinnæ undergo a remarkable change on the lower part of the stipes, forming *abortive pinnæ*, brief, (from three to four inches long,) many times multifid, with narrow membranaceous hyaline segments, having a rigid costa, and so resembling a *Trichomanes* growing parasitically on the *Alsophila*, that Kaulfuss named it *Trichomanes? cormophyllum*.

There is a variety known as var. *Polyantha*, which bears from four to six sori on each segment.

For fronds my thanks are due to Mr. G. Norman, of Hull, and to Mr. Smith, Curator of the Royal Gardens, Kew.

It may be procured of Messrs. Veitch, of the Exotic Nursery, Chelsea, and of Mr. R. Sim, of Foot's Cray.

The illustration is from Mr. Norman's fronds.

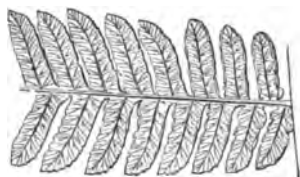












Portion of mature Frond—under side.

## ALSOPHILA AUSTRALIS.

R. BROWN. HOOKER. SIEBER. J. SMITH. PRESL. FEE.  
SPRENGEL. DESVAUX. MOORE. KUNZE. BRACKENRIDGE.

PLATE LXIII. VOL. VIII.

*Alsophila*—From *alsos*, a grove, and *philos*, to live, alluding to the habitat of the Ferns. *Australis*—Australian.

A HANDSOME rare Fern.

An evergreen warm greenhouse species.

Native of New Holland and Tasmania.

FronDS glabrous, bipinnate, and ovate-lanceolate in form, the pinnules (which are only from two to four inches in length,) are linear-lanceolate in form, acuminate, and profoundly pinnatifid, segments ovate-acute. Stipes and rachis muricate, base scaly.

Veins simple and forked.

Sori from one to four, situated on the basal portion of the segment.

Length of frond from ten to thirteen feet; colour pale green, somewhat glaucous beneath; caudex arborescent, the stems rising to the height of thirty feet, and being about three feet in circumference near the base.

VOL. VIII.

2 B

For a plant my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew; and for fronds to Mr. D. Moore, of the Glasnevin Gardens, and to Mr. Veitch, of Chelsea.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Kennedy, of Covent Garden; and Sim, of Foot's Cray.

The illustration is from Mr. D. Moore's fronds.





100

PLANTAS DE LA ZONA DE LA  
COSTA DE GUATEMALA

Digitized by Google









Portion of fertile Frond—under side.

## ALSOPHILA RADENS.

KAULFUSS. HOOKER. J. SMITH. SPRENGEL. MOORE.  
PRESL. KUNZE. METTENIUS.

PLATE LXIV. VOL. VIII.

*Alsophila*—From *alsos*, a grove, and *philos*, to live, alluding to the habitat of the Ferns. *Radens*—Scraping.

AN interesting species.

An evergreen stove Fern.

Native of Brazil.

The fronds, which are bipinnate and somewhat pointed in form, and smooth, have linear-lanceolate pinnatifid pinnules; pinnæ about two feet in length, approximate, and sub-opposite, segments oblong-obtuse. Pinnules an inch and a half to two inches in length.

Veins branched.

Costa paleaceous. Stipes and rachis scaly and blackish, densely aculeate at the base.

Sori small and globose.

The fronds rising from a tree-like crown.

Length of frond from four to six feet; colour brilliant green.

My obligations are due to Mr. J. Henderson, of Wentworth; Mr. D. Moore, of the Glasnevin Botanic Gardens; Mr. Veitch, of Chelsea; and to Mr. Norman, of Hull, for fronds of this species.

It can be procured of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; Kennedy, of Covent Garden; and Stansfield, of Todmorden.

The illustration is from Messrs. Veitch's frond.





ALSOPHILA FEROX.—PORTION OF PINNA.  
I, XV—Vol. 8.







Portion of mature Frond—under side.

## ALSOPHILA FEROX.

PRESL. HOOKER. FEE. KUNZE. BRACKENRIDGE. SCHOTT.

PLATE LXV. VOL. VIII.

<i>Alsophila armata</i> ,	MARTIUS. ( <i>Not of</i> PRESL.)
“ “	SPLITGERBERG. SCHNIZL. METTENIUS.
“ <i>Sellowiana</i> ,	PRESL.
“ <i>aculeata</i> ,	KUNZE. J. SMITH. ( <i>Not of</i> HOOKER.)
“ <i>Raddiana</i> .	GAUDICHAUD.
<i>Cyathea ferox</i> ,	PRESL.
<i>Polypodium aculeatum</i> ,	RADDI. SPRENGEL. DESVAUX.
“ <i>armatum</i> ,	WILDENOW. KUNZE.
<i>Chnoophora aculeata</i> ,	KAULFUSS.

*Alsophila*—From *alsos*, a grove, and *philos*, to live, alluding to the habitat of the Ferns. *Ferox*—Fierce, in reference to the thorny character of the plant.

A COARSE-LOOKING, large-growing, though elegant Fern, remarkable for lengthy sharp thorns, with which it is abundantly provided.

An evergreen stove species.

Native of South America and West Indies, Jamaica, Brazil, Bahia, Surinam, Guiana, Cayenne, and Trinidad.

The fronds, which are glabrous, are broadly lanceolate in form, bipinnate, with sessile, linear-lanceolate, rather membranous, profoundly pinnatifid pinnules, and linear-oblong, somewhat falcate segments, with a serrated margin.



Rachis, stipes, and even midrib of pinnæ aculeate, with long sharp thorns.

Length of frond from five to seven feet.

Fronds terminal; caudex erect and often branching.

Sori copious, but not wholly covering the segments.

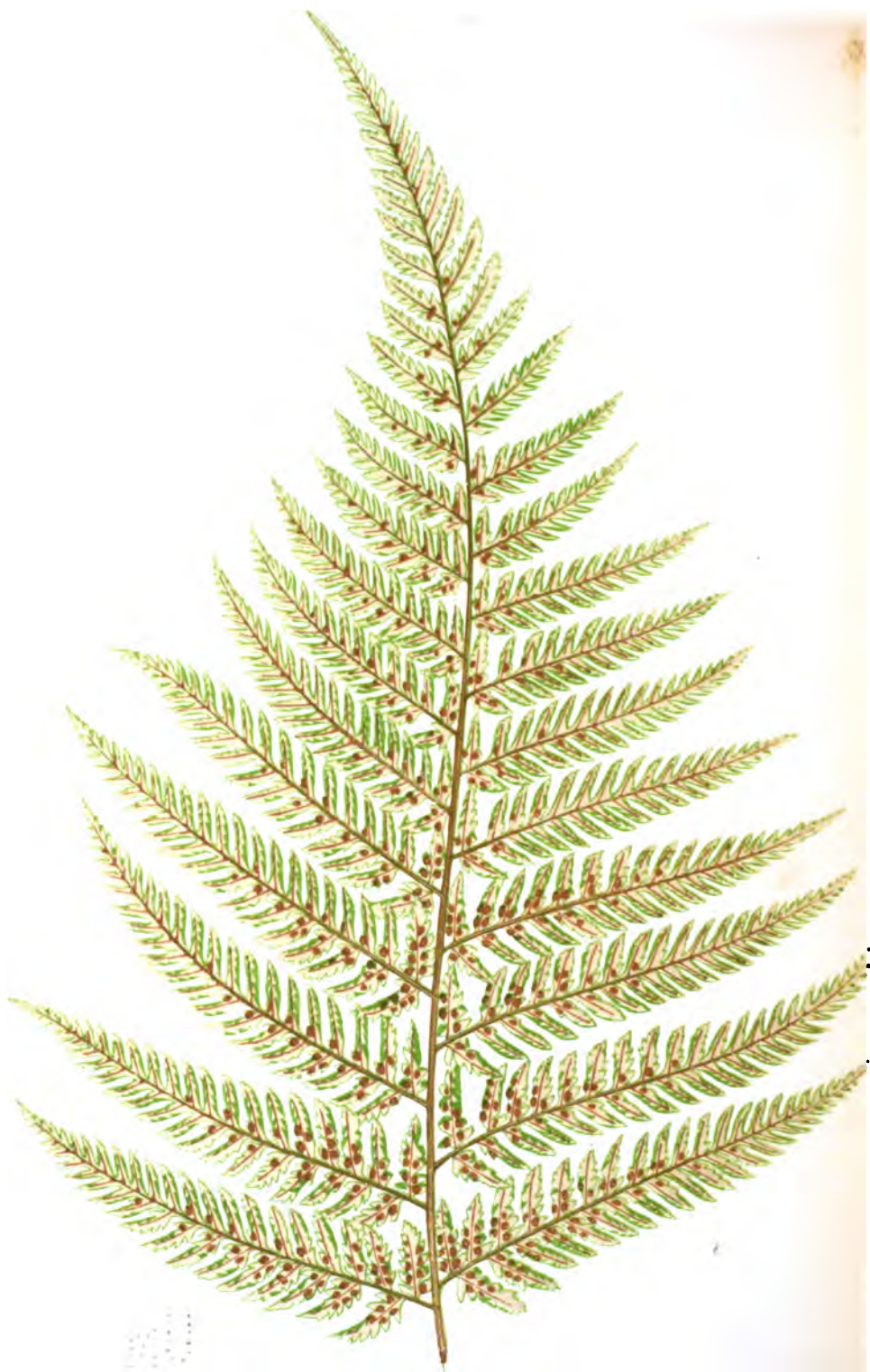
For fronds my thanks are due to Mr. J. Henderson, of Wentworth, and Mr. Norman, of Hull.

It may be procured of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; Jackson, of Kingston; Kennedy, of Covent Garden, Sim, of Foot's Cray; and Booth, of Hamburg.

The illustration is from Mr. J. Henderson's frond.













Portion of fertile Frond—under side.

## ALSOPHILA PRUINATA.

KAULFUSS. HOOKER. KUNZE. MOORE. LINNÆUS.  
 PRESL. MARTENS AND GALLEOTTI. KLOTZSCH. FEE.  
 METTENIUS.

PLATE LXVI. VOL. VIII.

<i>Polypodium pruinatum</i> ,	SWARTZ. WILLDENOW. SPRENGEL.
“ “	DESVAUX. KAULFUSS. PRESL.
“ <i>glaucum</i> ,	SWARTZ.
“ <i>cinereum</i> ,	CAVANILLES.?
“ <i>griseum</i> ,	SCHKUHR.
“ <i>cæsum</i> ,	PRESL.?
<i>Cyathea discolor</i> ,	BORY. FEE.
<i>Lophosoria pruinata</i> ,	PRESL. J. SMITH.
“ <i>discolor</i> ,	PRESL.
“ <i>affinis</i> ,	PRESL. KUNZE.
“ <i>polypodioides</i> ,	PRESL.
<i>Alsophila cinerea</i> ,	MARTIUS.
“ <i>affinis</i> ,	FEE. SCHOTT.
“ <i>Deckeriana</i> ,	KLOTZSCH. KUNZE.
<i>Trichosorus glaucescens</i> ,	LIEBMANN.
“ <i>frigidus</i> ,	LIEBMANN.

*Alsophila*—From *alsos*, a grove, and *philos*, to live, alluding to the habitat of the Ferns. *Pruinata*—Like hoar-frost, in reference to the glaucous under side of the frond.

A VERY beautiful large-growing species, and exceedingly distinct.

An evergreen stove Fern.

Native of Jamaica, Brazil, Chili, Mexico, Juan Fernandez, Conception Island, Valdivia, Columbia, Venezuela, Caraccas, New Granada, and Chilœ.

Fronds bipinnate and ovate-lanceolate; pinnules very numerous, lanceolate, profoundly pinnatifid, and not much exceeding an inch in length; segments ovate-lanceolate, very acute, and sinuato-serrate.

Veins simple.

A solitary sorus at the base of each segment.

Rachis and stipes with soft woolly hairs.

Length of frond from four to six feet; colour light green on the upper surface, and very glaucous beneath, almost silvery, indeed as much so as the *Cyathea dealbata*.

Sir W. J. Hooker remarks that it is an abundant Jamaica Fern, and that it has a stem from three to eight feet in height, the stipes perfectly smooth, and that Mr. Douglas compares it to a small pine tree, leafy at the top.

For fronds I must tender my thanks to Mr. G. Norman, of Hull.

This plant can be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Kennedy, of Covent Garden; and Booth, of Hamburg.

The illustration is from a frond forwarded by Mr. Norman.

## OSMUNDEÆ.

---

GENUS II.

## TODEA. WILLDENOW.

FRONDS bipinnatifid, fertile fronds subcontracted. Veins forked, venules free. Sori naked. Allied to *Osmunda*.

A small genus, of which two only are introduced into England, namely, *Todea Africana*, and *T. hymenophylloides*, both natives of the southern hemisphere.

For Genus I. *Osmunda*, see pages 1 to 10 of the present volume.









ADIANTHUM AMERICANUM  
LXXVII-VOL. 8.







Portion of Frond, barren and fertile—under side.

## TODEA AFRICANA.

WILLDENOW. SCHKUHR. HOOKER. J. SMITH.

PLATE LXVII. VOL. VIII.

*Todea rivularis*,  
*Acrostichum barbarum*,  
*Todea Australasica*,

SIEBER. J. SMITH. KUNZE.  
 LINNÆUS.  
 A. CUNNINGHAM.

*Todea*—Named after H. J. Tode, a German cryptogamist.  
*Africana*—African.

A HANDSOME *Osmunda*-looking Fern, and closely allied to that genus. It will be seen that I have united under *Todea Africana*, the two Ferns known as *Acrostichum barbarum* of Linnæus, and *Todea rivularis* of Sieber.

A warm greenhouse species.

Native of South Africa, Australia, and Tasmania.

Fronds bipinnatifid, coriaceous, and spreading, widest in the middle, and of an oval triangular form. Pinnæ sub-opposite.

Veins forked, venules free.

Sori naked, oblong-linear, eventually confluent, the four or five pair of basal segments alone fertile, and these are minutely stalked.

VOL. VIII.

2 C

In all but the upper pinnæ, the segments are divided quite to the decurrent belt, which runs along the midrib; in the upper portion of the frond this is not the case. Margin serrated. Apex attenuated.

Rachis and stipes very long, smooth, and stout, rising from an elevated crown.

Length of frond from three to six feet; colour deep green.

For a plant my thanks are given to M. Schott, Director of the Imperial Gardens of Schonbrunn; and for fronds to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. G. Norman, of Hull; and Mr. Henderson, of Wentworth.

It may be procured of Messrs. Rollisson, of Tooting; Veitch, of Chelsea; Sim, of Foot's Cray; Kennedy, of Covent Garden; Cooling, of Derby; and Booth, of Hamburg.

The illustration is from Mr. J. Smith's fronds.







100







Portion of mature Frond—under side

## TODEA HYMENOPHYLLOIDES.

RICHARD. HOOKER. J. SMITH.

PLATE LXVIII. VOL. VIII.

<i>Todea pellucida</i> ,	CARMICHAEL. HOOKER.
<i>Leptopteris hymenophylloides</i> ,	PRESL.

*Todea*—Named after H. J. Tode, a German cryptogamist.  
*Hymenophylloides*—Hymenophyllum-like.

AN exceedingly lovely hymenophyllum-looking graceful Fern, which should be in every collection.

An evergreen greenhouse species.

Native of New Zealand.

Fronds bipinnatifid, membranaceous, pellucid, and multifid, spreading, triangular in form, and three to four inches wide. Pinnæ opposite, and segments sub-opposite, pinnæ approximate, the two basal pairs widest.

Veins forked, direct, and free.

Sori naked, and scattered in little bundles over the lower half of the frond.

Rachis, stipes, and midrib of pinnæ slender and hirsute; crown stout and elevated.

Length of frond from twelve to sixteen inches; colour vivid green.

This plant should be grown in a porous soil in a damp

atmosphere, and in a situation where there is very little sunshine. In a freely-ventilated greenhouse it will require the protection of a hand-light.

For fronds my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. Sim, of Foot's Cray; and to Mr. Cooling, of the Mileash Nursery, Derby.

It may be procured of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; and Cooling, of Derby.

The illustration is from Mr. Cooling's fronds.

LINDSÆÆ.

HAVING sporangiferous receptacles combined, forming a linear, continuous, or interrupted marginal sorus.

---

GENUS I.

DICTYOXIPHIIUM. HOOKER.

REPRESENTED by a solitary species, the *Dictyoxiphium Panamense*.

Fronds ensiform, simple, the fertile ones contracted. Sori linear and continuous, forming a marginal belt on either edge of the frond. Veins compoundly-anastomosing, and internal:

The habit and general appearance of the plant (excepting as regards the sori) not unlike *Polypodium irioides*.



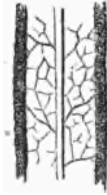












Portion of fertile Frond—under side.

## DICTYOXIPHIMUM PANAMENSE.

HOOKEr. J. SMITH.

PLATE LXIX. VOL. VIII.

*Dictyoxiphium*—Signifying a *sword*, in allusion to the form of the frond, and a *net*, to its reticulated veins. *Panamense*—Of Panama.

A VERY distinct-looking Fern, singular in appearance, and rare.

An evergreen stove species.

Native of the Isthmus of Panama, where it was found by Cuming, and of New Grenada, where it was found by Purdie. Somewhat erect in habit.

Fronds glabrous, simple, entire, linear-lanceolate in form, or ensiform, coriaceous, attenuated towards the base and apex, and decurrent on the stipes. Rhizoma fasciculate, stout, and erect.

Stipes short, and, as well as the midvein, scaly.

Sori linear, marginal, continuous, and double. Indusium linear and continuous, and opening from the upper surface of the frond.

Fertile fronds contracted.

Veins internal, compoundly anastomosing, with free veinlets terminating in the areoles.

Length of frond from twenty-four to thirty-six inches, width

from two inches to two inches and a half. Costa stout, being prominent on both sides of the frond, and ebeneous.

For fronds my obligations are due to Mr. J. Smith, Curator of the Royal Gardens, Kew; Mr. D. Moore, of the Glasnevin Botanic Gardens; Mr. Veitch, of the Exotic Nursery, Chelsea; and Mr. Sim, of Foot's Cray.

It may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Rollisson, of Tooting; and Jackson, of Kingston.

The illustrations are from Mr. Veitch's fronds.

## SCHIZÆÆ.

SPORANGIA oval or oblong, opening on the exterior side, on contracted racemes, or on terminal or marginal appendices, or the fertile frond contracted. Apical ring complete.

---

## GENUS I.

## MOHRIA. SWARTZ.

A SOLITARY species from Southern Africa represents this genus, namely, the *Mohria thurifraga*.

The fronds, which are bipinnate and having entire pinnæ, have the fertile ones contracted, forming a sporangiferous raceme.

Veins free. Sporangia sessile, almost globose, and opening vertically on their exterior side.









ADIANTUM THURBERGII - FROND OF FERN  
 LXXVII.







Portion of fertile Frond—under side.

## MOHRIA THURIFRAGA.

SWARTZ. SCHKUHR. HOOKER. J. SMITH. SCHOTT.

PLATE LXX. VOL. VIII.

*Osmunda thurifraga*,

LINNÆUS.

*Mohria*—Named after M. Mohr, a German botanist.

*Thurifraga*—Frankincense.

A most interesting and distinct Fern, of erect habit.

An evergreen stove species.

Native of South Africa.

Received into the Royal Gardens, Kew, from the Royal Botanic Gardens of Berlin, in 1841.

Fronds bipinnate, narrow, equal in width, except near the apex and base; pinnæ entire, laciniated, or multifid, the fertile pinnæ usually contracted or sub-contracted. Pinnæ opposite or sub-opposite, distant below, approximate above.

Veins free and direct.

Sporangia sessile, nearly globose in form, opening vertically on their exterior side, and forming a raised border of rounded prominences along the edge of the frond on the under side.

Rhizoma short and creeping briefly.

Stipes and rachis very scaly; scales reddish. Leafy almost to the base.

Length of frond from twelve to twenty-four inches.

The fertile fronds are longer than the sterile ones, and the contraction of their lobes over the seed-masses gives them a very elegant appearance.

There is a variety known in gardens as *Mohria achilleæfolia*, named after the Yarrow, (*Achillea millefolium*,) the barren fronds of which it much resembles; this is dwarfer in habit, being only from six to nine inches in length, the barren fronds shortest and spreading, the fertile ones erect. A rare, lovely Fern.

For plants I am indebted to Mr. D. Moore, of the Glasnevin Gardens, and to Mr. J. Henderson, of Wentworth; and for fronds to Mr. J. Henderson; Mr. Norman, of Hull; and M. Schott, of the Imperial Gardens, Schonbrunn.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Cooling, of Derby; and Booth, of Hamburg.

The illustration is from a plant in my own collection.

## GENUS II.

## ANEMIDICTYON. J. SMITH.

A SMALL family of st<sup>c</sup>e Ferns, having tripartite fertile fronds, the two opposite segments being contracted and erect in habit, forming two unilateral, sporangiferous, compound panicles, the third being sterile and spreading.

Veins forked; venules reticulated.

Mr. Moore, in his "Index Filicum," gives—

Hirtum, *Presl*, West Indies.

Phyllitidis, *J. Smith*, West Indies.

Tweedieanum, *Moore*, Brazil.

There is no British representative.









111111

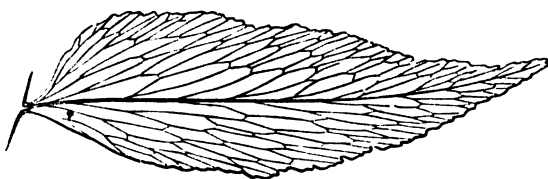
AN. 111111. 111111. 111111.

111111-111111.

Digitized by Google







Sterile pinnule—under side.

## ANEMIDICTYON PHYLLITIDIS.

J. SMITH. HOOKER. PRESL. MOORE. BRACKENRIDGE.

PLATE LXXI. VOL. VIII.

<i>Osmunda phyllitidis</i> ,	LINNÆUS. PLUMIER. LAMARCK.
" "	VELLOZ.
" <i>Brasilensis</i> ,	VELLOZ.
<i>Anemia phyllitidis</i> ,	SWARTZ. WILLDENOW. SPRENGEL.
" "	LIEBMANN. HOOKER. RADDI.
" "	DESLAUX. KAULFUSS. LINK.
" "	METTENIUS. SCHLECHTENDAL.
" "	KUNZE. KLOTZSCH.
" <i>fraxinifolia</i> ,	RADDI. GOLDM. DESVAUX.
" "	GAUDICHAUD. KUNZE. SCHOTT.
" <i>longifolia</i> ,	RADDI. GOLDM. KUNZE.
" <i>cordifolia</i> ,	PRESL. SPRENGEL.
" <i>Hænkei</i> ,	MARTENS AND GALLEOTTI. PRESL.
" "	SPRENGEL. KUNZE.
" <i>lanceolata</i> ,	LODDIGES. SWEET.
" <i>hirta</i> ,	RADDI. PEPPIG. ( <i>Not of</i> SWARTZ,
	WILLDENOW, SPRENGEL, LINK,
	KUNZE, or J. SMITH.)
" <i>sorbifolia</i> ,	SCHRAEDER.
" <i>repanda</i> ,	R. BROWN.
" <i>laciniata</i> ,	LINK. KUNZE.
<i>Anemidictyon fraxinifolium</i> ,	J. SMITH. PRESL.
" <i>laciniatum</i> ,	PRESL.

*Anemidictyon*—From *ancimon*—naked, in reference to the naked inflorescence, and *diktuon*—a net, in reference to the reticulated venation.

*Phyllitidis*—Phyllitis-like.

A SINGULAR *Osmunda*-looking flowering Fern, of which there are several distinct forms. •

An evergreen stove species.

Native of the West Indies, Jamaica, Island of Trinidad, Brazil, Peru, Columbia, Venezuela, New Grenada, Mexico, and Caraccas. Amongst Mexican stations Liebmann found it at three thousand feet above the sea, at Mirador and Oajaca, and at four thousand feet at Chinantla: Schiede found it at Jalapa, and Galleotti at Zacuapan.

Raised in the Royal Gardens, Kew, in the year 1829.

Fronds pinnate, the fertile ones ternately branched, the two lateral branches distinct, erect, and fertile; the terminal one spreading and sterile. Fronds triangular and stipitate; the pinnæ, from three to five pairs, and an ultimate one, entire, and ovate-lanceolate in form. Veins forked; venules reticulated.

Rhizoma brief and erect.

Spore-cases sessile, biserial on the ultimate segments, and oval in form.

Length of frond from twelve to twenty inches; colour a pale green.

Of the many forms of *Anemidictyon phyllitidis*, the variety *Longifolium* is found in Brazil and Peru; the variety *Cordifolium* also in Brazil and Peru, and in Venezuela, Caraccas, and Mexico; whilst the varieties *Fraxinifolium* and *Laciniatum* are both Brazilian.

Stipes lengthy.

For plants my thanks are due to M. Schott, Director of the Imperial Gardens of Schonbrunn, Vienna; Mr. Stratton, Curator of the Cambridge Botanic Gardens; Mr. J. Henderson, of Wentworth; Messrs. Rollißon, of Tooting; and Booth, of Hamburg.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Rollißon, of Tooting; Veitch, of Chelsea; Jackson, of Kingston; E. G. Henderson, of Wellington Nursery; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Stansfield, of Todmorden; Cooling, of Derby; and Booth, of Hamburg.

The illustration is from a plant in my own collection.





LYGODIUM JAPONICUM.—PINNA  
LXXII—VOL. 8.







## GENUS III.

## LYGODIUM. SWARTZ.

A GENUS of climbing Ferns, twining around supports, and growing to a great height. The pinnæ conjugate. Veins forked and free, extending beyond the margin, and forming sporangiferous spiculæ.

Mr. Smith, in his "Catalogue of the Ferns Cultivated at Kew," enumerates—

Palmatum, *Swartz*, North America.

Flexuosum, *Swartz*, East Indies.

Scandens, *Swartz*, East Indies.

Japonicum, *Swartz*, Japan.

Articulatum, *A. Richard*, New Zealand.

There is no British representative.





Portion of fertile Frond.

## LYGODIUM JAPONICUM.

SWARTZ. MOORE.

PLATE LXXII. VOL. VIII.

*Lygodium scandens*,

OF GARDENS.

*Lygodium*—From *lygodes*, flexible, in allusion to the twining habit of the plants. *Japonicum*—Japanese.

A VERY pretty climbing Fern.

A stove species.

Native of China and Japan.

Rachis scandent; fronds branched, mostly conjugate; fertile fronds contracted.

Veins forked; venules free, in the fertile spikelets pinnate.

Fructification compressed, dichotomous spikelets, exerted on the marginal teeth.

The fronds, which are twining, extend to an indefinite length.

For plants my thanks are offered to Mr. Joseph Henderson, of Wentworth; Mr. A. Henderson, of Pine-apple Place; Mr. Stratton, of the Cambridge Botanic Gardens; Mr. Lamb, of

Osmaston Manor; and M. Schott, of the Imperial Gardens of Schonbrunn: for fronds I am indebted to Mr. Norman, of Hull; Mr. Sim, of Foot's Cray; Miss Carr, of Qualt Rectory, Bridgenorth; and Messrs. Booth, of Hamburg.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.



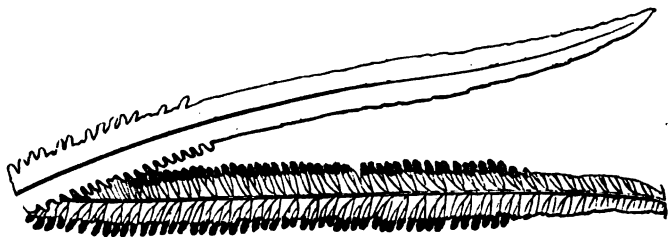


1871









Portion of fertile Frond—under side.

## LYGODIUM FLEXUOSUM.

SWARTZ. J. SMITH.

PLATE LXXIII. VOL. VIII.

*Ophioglossum flexuosum*,  
*Lygodium dichotomum*,  
*Hydroglossum flexuosum*,

LINNEUS.  
 SWARTZ. HOOKER AND GREVILLE.  
 WILLDENOW.

*Lygodium*—From *lygodes*, flexible, in allusion to the twining habit of the plants. *Flexuosum*—Winding.

A VERY beautiful climbing Fern, which deserves to be extensively grown, and is the finest plant of this genus.

A stove species.

Native of the East Indies and the Malayan Archipelago.

Cultivated in the Royal Gardens, Kew, in 1834.

Fronds sub-bipartite; pinnules about twelve inches in length, smooth and vivid green, palmate, lanceolate-acuminate, serrulate, the fertile ones very much narrower, and bearing the spore-cases along the edges.

Veins branching and conspicuous.

The fronds, which are in pairs on inch long stalks and

VOL. VIII.

2 E

opposite each other, are distant, that is, usually about twelve inches apart.

For fronds I am indebted to Mr. Clarke, Curator of the Royal Botanic Gardens of Glasgow.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; and Kennedy, of Covent Garden.

The illustration is from Mr. Clarke's fronds.











Portion of Frond.

## LYGODIUM PALMATUM.

SWARTZ. SCHKUHR. MOORE. J. SMITH.

PLATE LXXIV. VOL. VIII.

*Hydroglossum palmatum*, WILLDENOW.

*Lygodium*—From *lygodes*—flexible, in allusion to the twining habit of the plants. *Palmatum*—Hand-shaped.

AN interesting, very slender, climbing Fern.

A greenhouse or half-hardy species.

Introduced into the Royal Gardens, Kew, in 1845, by Dr. A. Gray.

Native of North America.

Sterile fronds smooth, brilliant green, and conjugate; pinnæ palmate, four to six-lobed in the barren portion, that is, the lower portion of the frond; the lobes oblong-obtuse and somewhat crenulate.

Fertile fronds contracted into small spikes; segments linear.

The fronds, which are palmate, that is, divided into five finger-like parts, are much more dwarf than in the majority of this genus.

Roots creeping every way in an intricate mass.

Length of frond from twelve to thirty-four inches.



For a plant and fronds my thanks are due to Mr. Joseph Henderson, of Wentworth.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Rollisson, of Tooting; and Kennedy, of Covent Garden.

The illustration is from a frond sent by Mr. Joseph Henderson, of Wentworth.





100

PODOPHYLLUM HARWINSII A. N. S.

N. L. - VOL. 1.





## MARATTIACEÆ. KAULFUSS.

LARGE Ferns, with dorsal sporangia, exannulate, horny, opening by a longitudinal slit.

## GENUS I.

## ANGIOPTERIS. HOFFMANN.

FRONDS erect and subarboreous, rising from between two fleshy appendages. Veins simple or forked, and free. Sori biserial, opening on the inner side, forming a broad marginal row.

Two species, both stove plants, have been introduced into England, namely, *Angiopteris evecta* and *A. Teymanniana*.

Mr. Moore, in his "Index Filicum," gives—

Acrocarpa, <i>De Vriese</i> , Society Isles.	Beecheyana, <i>De Vr.</i> , Caroline Isles.
Amboinensis, <i>De Vr.</i> , Amboyna.	Brongniartiana, <i>De Vr.</i> , Tahiti.
Angustifolia, <i>Presl</i> , Philippine Isles.	Camptophlebia, <i>De Vr.</i> , India.
Angustata, <i>Miquel</i> , Java.	Caudata, <i>De Vriese</i> , Philippine Isles.
Ankolana, <i>De Vriese</i> , Sumatra.	Cochinchinensis, <i>De Vriese</i> , Cochin China.
Aphanosorus, <i>De Vr.</i> , Sumatra.	Commutata, <i>Presl</i> , Society Isles.
Approximata, <i>De Vr.</i> , Sumatra.	Crassifolia, <i>De Vriese</i> , Java.
Arnotiana, <i>Miquel</i> , India.	Crassipes, <i>Wallich</i> , India.
Assamica, <i>De Vriese</i> , Assam.	Cupreata, <i>De Vriese</i> , Society Isles.
Attenuata, <i>Brackenridge</i> , Philippine Isles.	Cuspidata, <i>De Vriese</i> , Java.
Aurata, <i>De Vriese</i> , N. Zealand.	

- |   |  |
|---|--|
| <p>Distans, <i>Presl</i>, India.<br/> Dregeana, <i>De Vriese</i>, Java.<br/> D'Urvilleana, <i>De Vr.</i>, Society<br/> Isles.<br/> Erecta, <i>Hoffmann</i>, Society Isles.<br/> Gaudichaudiana, <i>De Vr.</i>, India.<br/> Griffithiana, <i>De Vr.</i>, Mergui.<br/> Hartingeana, <i>De Vriese</i>, Java.<br/> Helferiana, <i>Presl</i>, India.<br/> Hookeriana, <i>De Vriese</i>, India.<br/> Hugeliana, <i>Presl</i>, India.<br/> Hypoleuca, <i>De Vriese</i>, Java.<br/> Indica, <i>Desvauz</i>, India.<br/> Laciniata, <i>De Vriese</i>, India.<br/> Lasegueana, <i>De Vr.</i>, Huachine.<br/> Latifolia, <i>Presl</i>, India.<br/> Leschenaultiana, <i>De Vr.</i>, Ceylon.<br/> Longifolia, <i>Hooker</i>, Society Isles.<br/> Macrocephala, <i>Presl</i>, India.<br/> Macrophylla, <i>De Vriese</i>, India.<br/> Madagascariensis, <i>De Vriese</i>,<br/> Madagascar.</p> | <p>Magnifica, <i>Miquel</i>, Ceylon.<br/> Marginata, <i>De Vr.</i>, Ceylon.<br/> Microsporangia, <i>De Vriese</i>,<br/> Sumatra.<br/> Miqueliana, <i>De Vriese</i>, Java.<br/> Muricata, <i>Presl</i>, Borneo.<br/> Pallescens, <i>De Vriese</i>, Sumatra.<br/> Plagiocarpa, <i>De Vriese</i>, Ceylon.<br/> Polysporangia, <i>De Vr.</i>, Ceylon.<br/> Presliana, <i>De Vriese</i>, Java.<br/> Pruinosa, <i>Kunze</i>, Java.<br/> Punctata, <i>De Vriese</i>, Ceylon.<br/> Repandula, <i>De Vriese</i>, India.<br/> Salicifolia, <i>De Vriese</i>, India.<br/> Similis, <i>Presl</i>, Java.<br/> Suboppositifolia, <i>De Vr.</i>, Ceylon.<br/> Sylhetensis, <i>De Vriese</i>, India.<br/> Teysmanniana, <i>De Vriese</i>, Java.<br/> Uncinata, <i>De Vriese</i>, Amboyna.<br/> Wallichiana, <i>Presl</i>, India.<br/> Wightiana, <i>De Vriese</i>, India.<br/> Willinkii, <i>Miquel</i>, Java.</p> |
|---|--|

Mr. Moore thinks that when the species are better known many of the above may be referred to *A. erecta* and *A. crassipes*.



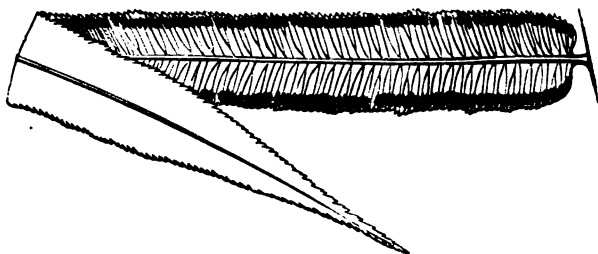




100







Pinnule of mature Frond—under side.

## ANGIOPTERIS EVECTA.

HOFFMANN. SWARTZ. SCHKUHR. J. SMITH. MOORE.  
 POIRET. KAULFUSS. PRESL. DESVAUX. GAUDICHAUD.  
 KUNZE. BRACKENRIDGE. DE VRIESE. SPRENGEL.  
 (Not of HOOKER AND ARNOTT, MORITZ, WILLDENOW,  
 DREGE, or HOOKER AND GREVILLE.)

PLATE LXXV. VOL. VIII.

*Polypodium evectum*,  
*Danaea evecta*,

FORSTER.  
 SPRENGEL.

*Angiopteris*—From *aggrion*—a vessel, and *pterus*—a wing.  
*Evecta*—Exalted.

A VERY handsome gigantic-fronded Fern.

A stove species.

Native of Ceylon and the Islands of the Pacific Ocean,  
 Society Isles, and Feejee.

Fronds erect and subarboreous, each rising from between  
 two fleshy stipulæform appendages, the base of the stipes being

clavate; bipinnate; pinnules lanceolate-acuminate, the apices serrated, and articulated with the rachis.

Veins, part simple, but mostly forked, conspicuous, being paler in colour than the frond.

Sporangia subterminal, biserial, sessile, free, and opening by a slit on the inner side.

Sori oblong and laterally contiguous, forming a broad sub-marginal row.

Length of frond from ten to eighteen feet; colour bright green.

Rhizoma fleshy.

Rachis and stipes hirsute, especially near the base.

Pinnæ sub-opposite, without a terminal pinna.

For a plant my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrunn, near Vienna, and Mr. Veitch, of the Exotic Nursery, Chelsea.

It may be procured of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Jackson, of Kingston; Kennedy, of Covent Garden; Rollißon, of Tooting; E. G. Henderson, of St. John's Wood; and A. Henderson, of Pine-apple Place.

The illustration is from Mr. Veitch's frond.





Digitized by

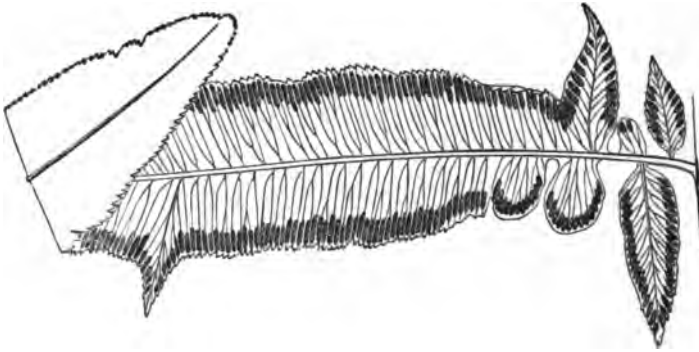
Digitized by Google

Digitized by Google









Fertile pinnule—under side.

## ANGIOPTERIS TEYSMANNIANA.

DE VRIESE. J. SMITH. MOORE. KUNZE.

PLATE LXXVI. VOL. VIII.

*Angiopteris*—From *aggrion*—a vessel, and *pteris*—a wing.  
*Teysmanniana*—.....?

ANOTHER very handsome, large-fronded species.

An evergreen stove Fern.

Native of Java.

Fronds bipinnate and lanceolate; pinnæ alternate, thick at the base; pinnules articulated.

Stipes much swollen at the base, covered when young with soft, brown, chaffy scales.

Pinnules half an inch wide, and from three to six inches long.

Veins forked; venules parallel and free.

Rhizoma fleshy.

Sori dorsal, involucrate, sessile, oblong in form, in two contiguous rows.

VOL. VIII.

2 G

Length of frond from six to twenty feet; colour brilliant light green.

For a plant my thanks are due to M. Schott, Director of the Imperial Gardens of Schonbrunn; and for fronds to Mr. J. Smith, Curator of the Royal Gardens, Kew.

It may be procured of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; and Kennedy, of Covent Garden.

The illustration is from Mr. Smith's frond.

## GENUS II.

## MARATTIA. SMITH.

FRONDS erect, subarboreous, the fronds rising from between two fleshy appendages, (which occasionally have the character of abnormal fronds.) Fronds bi-tripinnate. Veins simple or forked, and free. Sori biserial.

Mr. Smith, in the "Ferns of Kew," enumerates—

M. alata, <i>J. Smith</i> , West Indies.	M. cicutæfolia, <i>Kaulfuss</i> , Brazil.
M. elegans, <i>Endlicher</i> , New Zealand.	M. Ascensionis, <i>J. Smith</i> , Island of Ascension.





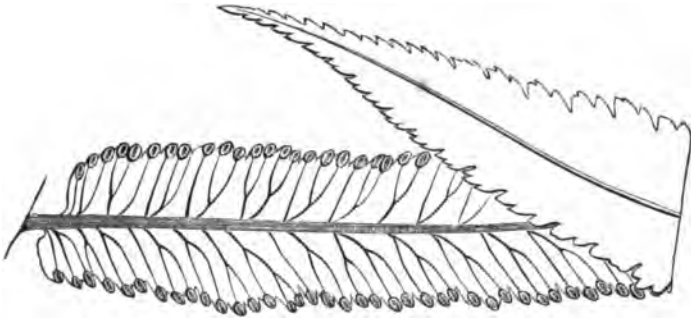


MARATTIA LAKA.—PORTION OF FROND.









Fertile pinnule--under side.

## MARATTIA LAXA.

KUNZE. LIEBMANN. METTENIUS.

PLATE LXXVII.—VOL. VIII.

*Gymnotheca laxa*,

PRESL. DE VRIESE. MOORE.

*Marattia*—Named in honour of J. F. Maratti, a Tuscan botanist.  
*Laxa*—Large.

A RATHER coarse-growing, lax-habited Fern, distinct in appearance from the other *Marattiaceous* Ferns introduced to cultivation.

An evergreen stove or warm greenhouse species.

Native of the temperate regions of Mexico.

Introduced to English gardens about six or eight years since, and a few years earlier to those of continental gardens.

Stem forming a thick, short, and fleshy trunk or root-stalk, as in the other species; which is invested with the stipule-like scales at the base of the stipites.

Fronds large, stipitate, the lamina about three feet in length,

bipinnate, deltoid-ovate in outline, somewhat fleshy in texture, of a dull dark green, paler beneath. The pinnæ are opposite, oblong, and from twelve to eighteen inches long. The pinnules are broadly lance-shaped, acuminate, the lower ones cordate at the base; the fertile ones crenate or sinuate at the edges, and the sterile ones irregularly serrated: they are all remotely veined.

Sori placed near the ends of the veins in a line along each edge of the pinnules, the spore-cases shortly ellipsoid, bilobed, the lobes at length spreading.

Stipites from twelve to twenty-four inches long, and scaly in the lower part.

A rare Fern, of considerable bulk, interesting in a collection, but hardly to be placed among the more elegant and effective species.

For fronds I am indebted to Mr. Smith, Curator of the Royal Gardens, Kew.

It can be procured of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; and Sim, of Foot's Cray.

The illustration is from Mr. Smith's frond.

## ADDENDA TO THE EIGHT VOLUMES.

---

THE following synonyms have not been included with the different species in the several volumes, and are therefore appended here. The page added at the commencement of each addition represents the species described on that page; thus, vol. i., p. 3, will have reference to *Gymnogramma chrysophylla*.

In several instances additional habitats have been included.

---

### VOL. I.

PAGE.

- 3 *Gymnogramma chrysophylla*, *J. Smith.*
- 5 *calomelanos*, *J. Smith.*
- 7 *tartarea*, *J. Smith.*
- 9 *ochracea*, *J. Smith.*
- 11 *sulphurea*, *J. Smith.*
- 13 *rufa*, *J. Smith.*
- 15 *tomentosa*, *J. Smith.*
- 17 *leptophylla*, *J. Smith.*
- 21 *chærophylla*, *J. Smith.*
- 23 *L'Herminieri*, *J. Smith.*
- 25 *Martensii*, *J. Smith.*
- 27 *Leptogramme villosa*, *J. Smith.*
- 29 *totta*, *J. Smith.*
- 29 *Polypodium totta*, *Willdenow.*
- 29 *Grammitis totta*, *Presl.*
- 33 *Cincinalis nivea*, *J. Smith.*
- 33 *Pteris nivea*, *Lamarck.*
- 33 *Notholæna nivea*, *Desvaux.*

PAGE.

- 35 *Nothochlæna lævis*, *Martens & Galleotti, Moore.*
- 35 *Notholæna lævis*, *J. Smith.*
- 37 *Notholæna trichomanoides*, *J. Smith.*
- 39 *Cincinalis tenera*, *J. Smith.*
- 41 *Myriopteris tomentosa*, *Fee, J. Smith.*
- 43 *Notholæna lanuginosa*, *J. Smith.*
- 45 *Myriopteris vestita*, *J. Smith.*
- 47 *Notholæna Eckloniana*, *J. Sm.*
- 49 *Cheilanthes brachypus*, *T. Moore.*
- 51 *Notholæna Marantæ*, *J. Smith.*
- 55 *Cincinalis argentea*, *J. Smith.*
- 65 *Niphobolus adnascens*, *Kaulfuss, J. Smith.*
- 67 *Acrostichum lingua*, *Langsdorff and Fischer.*

## PAGE.

- 67 Polypodium lingua, *Swartz.*  
 67 Cyclophorus lingua, *Desvaux.*  
 67 Polycampium lingua, *Presl.*  
 67 Niphobolus Sinensis, *of Gardens.*  
 73 Phegopteris effusa, *J. Smith.*  
 75 Phymatodes longipes, *J. Smith.*  
 77 vulgaris, *J. Smith.*  
 79 Campyloneuron phyllitidis, *J. Smith.*  
 83 Phegopteris dryopteris, *J. Sm.*  
 85 calcaria, *J. Smith.*  
 87 vulgaris, *Mettenius, J. Smith.*  
 95 Goniopteris vivipara, *J. Smith.*  
 95 Not Polypodium fraxinifolium  
     *of Jacquin.*  
 97 Anapeltis vacciniifolia, *J. Sm.*  
 97 Polypodium buxifolium, *of Gardens.*  
 99 Phegopteris lachnopus, *J. Sm.*  
 101 Lepicystis sepulta, *J. Smith.*  
 105 Pleopeltis stigmaticum, *J. Sm.*  
 109 Goniophlebium subauriculatum,  
     *J. Smith.*  
 109 pleopeltis, *Fee.*  
 109 Polypodium Reinwardtii, *Kunze.*  
 109 metamorphum, *Kunze,*  
 115 Phegopteris alpestris, *J. Smith.*  
 119 Goniophlebium cuspidatum, *J. Smith, Presl.*  
 119 Polypodium cuspidatum, *Blume, (not Don.)*  
 119 grandidens, *Mettenius.*  
 119 colpothrix, *Kunze.*  
 119 Not Polypodium argutum,  
     *Wallich.*  
 121 Polypodium Schkuhrii, *Raddi, J. Smith.*

## PAGE.

- 125 Microsorium irioides, *J. Smith.*  
 125 irregulare, *Fee.*  
 125 sessile, *Fee.*  
 127 Phymatodes nuda, *J. Smith.*  
 127 Pleopeltis nuda, *Hooker.*  
 127 Polypodium loriforme, *Wallich.*  
 127 Pleopeltis loriformis, *Presl.*  
 127 Drynaria Fortunei, *Moore.*  
 127 Polypodium leiopteris, *Kunze, Mettenius.*  
 129 Drynaria diversifolia, *J. Smith.*  
 129 Polypodium diversifolium, *R. Brown.*  
 129 Gaudichaudii, *Bory.*  
 129 glaucistipes, *Wallich.*  
 129 Drynaria pinnata, *Fee.*  
 131 Not Polypodium glaucum,  
     *Raddi.*  
 133 Goniophlebium distans, *J. Sm.*  
 133 Polypodium polystichum, *Link.*  
 135 Goniopteris tetragona, *J. Smith.*  
 137 Phymatodes Billardieri, *J. Sm.*  
 137 Polypodium lepidopodium, *Link.*  
 137 diversifolium, *Willdenow.*  
 139 Lepicystis incana, *J. Smith.*  
 141 Campyloneuron angustifolium,  
     *J. Smith.*  
 141 Marginaria angustifolia, *Presl.*  
 141 Polypodium dimorphum, *Link.*  
 141 leucorhizon, *Klotzsch.*  
 141 amphostemum, *Kunze.*  
 143 Phegopteris hexagonoptera, *J. Smith.*  
 145 Anapeltis squamulosa, *J. Smith.*  
 145 Pleopeltis squamulosa, *Presl, Moore.*  
 145 Polypodium myrtifolium, *Lodd.*

## VOL. II.

## PAGE.

- 1 Polypodium Paradisæ, *J. Smith.*  
 3 Phegopteris trichodes, *J. Smith.*  
 3 Lastrea tenericaulis, *Moore.*  
 7 Campyloneurum decurrens,  
     *Moore.*  
 7 Campyloneuron decurrens, *J.*  
     *Smith.*  
 15 Pleopeltis membranacea, *Moore.*  
 15 Colysis membranacea, *J. Smith.*  
 15 Polypodium grandifolium,  
     *Wallich.*  
 17 Pleopeltis pustulata, *Moore.*  
 21 Polypodium repens, *Linnaeus.*  
 21 Campyloneurum caespitosum,  
     *Link and Moore.*  
 23 Phymatodes quercifolia, *Presl.*  
 27 Phlebodium areolatum, *J. Smith*  
     *and Moore.*  
 33 Polypodium pennigerum,  
     *Forster.*  
 35 Pleopeltis lepidopoda, *Moore.*  
 39 Goniopteris fraxinifolia, *Moore.*  
 43 Pleopeltis percussa, *Moore.*  
 51 Campyloneurum nitidum, *Moore.*  
 53 Pleopeltis leiorrhiza, *Moore.*  
 55 lycopodioides, *Moore.*

## PAGE.

- 57 Pleopeltis irioides, var. acuta,  
     *Moore.*  
 65 Goniophlebium loriceum, *Moore.*  
 69 Drynaria morbillosa, *Moore.*  
 71 Goniophlebium Catherinæ,  
     *Moore.*  
 73 Polypodium drepanum, *Moore.*  
 79 Campyloneurum lucidum, *Moore.*  
 79 nitidum, *Hooker.*  
 81 angustifolium, *Moore.*  
 83 Polypodium filipes, *Moore.*  
 89 Goniopteris scolopendrioides,  
     *Moore.*  
 95 Polypodium spectabile, *Moore.*  
 97 Pleopeltis terminalis, *Moore.*  
 99 Meniscium palustre, *Moore.*  
 101 Polypodium concinnum, *Moore.*  
 103 Pleopeltis longissima, *Moore.*  
 109 Goniopteris lucida, *Fee & Moore*  
 121 Phlebodium pulvinatum, *Moore.*  
 123 Drynaria Willdenovii, *Moore.*  
 133 Goniophlebium owariense,  
     *Moore.*  
 145 Hymenolepis spicata, *Moore.*  
 155 Ceratopteris thalictroides,  
     *Moore.*

## VOL. III.

## PAGE.

- 3 Adiantum concinnum, *Sprengel,*  
     *Desvauz, Kunze, Mettenius,*  
     *Fee.*  
 5 caudatum, *J. Smith, Kunze,*  
     *Brackenridge, not of Bory.*  
 5 hirsutum, *Sprengel, Presl,*  
     *Desvauz, Wallich, J. Smith,*  
     *Kunze.*

## PAGE.

- 5 Adiantum vestitum, *Fee.*  
 5 proliferum, *Roxburgh.*  
 5 caudatum, var. ciliatum,  
     *Blume and Moore, a form*  
     *having a large geographical*  
     *range, and being found in*  
     *India, China, Java, Ceylon,*  
     *Cape de Verd Isles, etc.*

VOL. VIII.

2 H

PAGE.

- 7 *Adiantum reniforme*, *Desvaux*,  
*Presl*, *Bracken.*, *Mettenius*,  
*Loddiges.*
- 7 var. *asarifolium*, *Moore*.  
(*A. asarifolium*, *Willdenow*,  
*Bory*, *Desvaux*, *Hooker*, *Fee*.  
*A. reniforme*, *Bory*, *Wallich*.  
*A. orientale*, *Bory*, *Willdenow*.)
- 9 trapeziforme, *Sprengel*,  
*Desvaux*, *Mettenius*.
- 9 var. *pentadactylon*, *Moore*.  
(*A. pentadactylon*, *Langsdorff*  
and *Fischer*.)
- 9 var. *Plumieri*, *Hooker*. (*A.*  
*trapezoides*, *Fee*.)
- 9 var. *oblongatum*, *Hooker*.  
(Not the *A. trapeziforme* of  
*Bory*, *Forster*, *Schkuhr*, or  
*Hudson*.)
- 11 *lucidum*, *Sprengel*, *Desvaux*,  
*Presl*, (not of *Loddiges*.)
- 11 *asperum*, *Desvaux*, *Kunze*.
- 11 *Pteris lucida*? *Caranilles*.
- 11 *aspera*, *Poiret*, *Willdenow*,  
*Swartz*, *Sprengel*.
- 11 *Adiantum lucidum*, var. *majus*,  
*Hooker*. *Cayenne*.
- 11 var. *anomalum*, *Hooker*.  
*Caripe*.
- 13 *macrophyllum*, *Sprengel*,  
*Desvaux*, *Martens* & *Galleotti*,  
*Schlechtendal*, *Mettenius*.  
(Not the *A. microphyllum* of  
*Kaulfuss*.)
- 15 *cuneatum*, *Desvaux*, *Gaudi-  
chaud*, *Arnott*, *Brackenridge*,  
*Mettenius*, (not of *Forster*  
and *Schlechtendal*.)
- 15 *Raddianum*, *Presl*.
- 15 *pendulinum*, *Hooker* and  
*Greville*.
- 15 *peltatum*, *German Gardens*.
- 15 *tenerum*, *Of some Gardens*.
- 17 *curvatum*, *Sprengel*, *Metten*.
- 19 *affine*, *Mettenius*, (not of  
*Willdenow*, *Forster*, *Schkuhr*,  
nor *Cunningham*.)

PAGE.

- 19 *Adiantum setulosum*, *Fee*.
- 21 *assimile*, *Schrader*, *Desvaux*,  
*Gaudichaud*, *Brackenridge*,  
(not of *Link*.)
- 21 *Æthiopicum*, *Swartz*, *Presl*,  
*Willdenow*, *Sprengel*, *Kunze*,  
*Desvaux*, *Kaulfuss*, *Hooker*.  
*Schlechtendal*.
- 21 *trigonum*, *Fee*, *Labillardiere*,  
*Link*.
- 21 *pellucidum*, *Martens* and  
*Galleotti*.
- 21 *thaliectroides*, *Schlechtendal*,  
*Willdenow*, *Kunze*, *Presl*, *Fee*.
- 21 *tenerum*, *Link*, (not of *Fee*,  
*Swartz*, *Willdenow*, *Sprengel*,  
*Desvaux*, *Kunze*, *Mettenius*,  
*Presl*, *Moore*, *Hooker*, *J.*  
*Smith*, *Roxburgh*, *Martens*,  
or *Galleotti*.)
- 21 *cycloides*, *Zenker*.
- 21 *rotundifolium*, *Colenzo*, (not  
of *Kunze* nor *Desvaux*.)
- 21 *trisinuatum*, *Colenzo*. (Found  
also in South Africa, India,  
Abyssinia, Mauritius, Japan,  
Madagascar, South America,  
Chili, Quito, Peru, Columbia,  
Venezuela, Caraccas, Brazil,  
Mexico, Guatemala, and  
Galapagos.)
- 23 *lunulatum*, *Desvaux*, *Blume*,  
*Kaulfuss*, *Don*, *Brackenridge*,  
*Kunze*, *J. Smith*.
- 23 *arcuatum*, *Willdenow*,  
*Desvaux*.
- 23 *dolabriforme*, *Hooker*, *Fee*,  
*Sprengel*.
- 23 *pteropus*, *R. Brown*.
- 23 *Pteris lunulata*, *Roxburgh*.
- 25 *Adiantum pubescens*, *Sprengel*,  
*Brackenridge*, (not of *Poiret*,  
nor *Raddi*.)
- 25 *hispidulum*, *Willdenow*, *R.*  
*Brown*, *Desvaux*, *Endlicher*,  
*Brackenridge*, *Moore* and  
*Houlston*, *Mettenius*.

PAGE.

- 25 *Adiantum nervosum*, Swartz,  
Desvauz, Willdenow.
- 25 *scabrum*, Wallich, (not of  
Willdenow, Kunze, Kaulfuss,  
or Moore.)
- 25 *flabellulatum*, Wallich, (not  
of Swartz, Willdenow, Presl,  
Sprengel, Desvauz, Kunze, or  
Fee.)
- 25 *hispidum*, var. *glabrum*,  
Hooker.
- 25 var. *tenellum*, Moore.
- 25 *tenellum*, Moore, Veitch.  
(Found also at Java, Ceylon,  
Amboyna, India, & Mauritius.)
- 27 *tenerum*, Sprengel, Desvauz,  
Kunze, Klotzsch, Mettenius,  
(not of Martens and Galleotti  
and Roxburgh.)
- 29 *formosum*, Wickstr, Des-  
vauz, Sprengel, Brackenridge,  
Mettenius, (not of Cunning-  
ham and Richard.)
- 29 *Busbyanum*, Colenso.
- 31 *affine*, Sprengel, Fee, Kunze,  
Desvauz, Brackenridge, J.  
Smith, (not of Martens and  
Galleotti.)
- 31 *trapeziforme*, Schkuhr, For-  
ster, (not of Swartz, Presl,  
Willdenow, Sprengel, Kunze,  
Desvauz, Link, Martens and  
Galleotti, Hooker, Fee, or  
Mettenius.)
- 31 *exile*, Colenso.
- 31 *longissimum*, Colenso.
- 31 *platyphyllum*, Colenso, (not  
of Sprengel, Presl, Kunze,  
Hooker, Moore, or Fee.)
- 33 *hispidulum*, Willdenow,  
Desvauz, Endlicher, Brack-  
enridge, Mettenius. Mr.  
Moore, considering that *A.*  
*hispidulum* and *A. pubescens*  
are forms of the same Fern,  
enumerates as synonymes the  
following:—*A. pubescens* of

PAGE.

- Schkuhr*, Willdenow, Presl,  
Sprengel, Link, Brackenridge,  
Kunze, (not of Poiret or  
Raddi.) *A. pedatum* of  
Forster, (not of Willdenow,  
Swartz, Schkuhr, Sprengel,  
Desvauz, Kaulfuss, Link,  
Ledebour, Smith, Presl, Fee,  
Kunze, Hooker, A. Gray,  
Brackenridge, Mettenius, or  
Raddi.)
- 33 *nervosum*, Swartz, Desvauz,  
Willdenow.
- 33 *plicatum*, Kaulfuss.
- 33 *scabrum*, Wallich, (not of  
Sprengel, Presl, Kunze, Fee,  
Brackenridge, Willdenow, or  
Hooker.)
- 33 *flabellulatum*, Wallich, (not of  
Swartz, Willdenow, Sprengel,  
Desvauz, Presl, Kunze,  
Hooker, Moore, and Fee.)
- 33 var. *glabrum*, Hooker.
- 33 var. *tenellum* of Moore,  
is the form here figured.
- 35 *obliquum*, Desvauz, Presl,  
Kunze, Fee, (not of Kaulfuss,  
or Schlechtendal.)
- 34 *Juglandifolium*, Willdenow.
- 35 *Not Adiantum lucidum* of  
Swartz, or *Pteris lucida* of  
Cavanilles.
- 37 *pedatum*, Desvauz, Link,  
Ledebour, A. Gray, Brack-  
enridge, Mettenius, (not of  
Forster or Raddi.)
- 37 var. *alenticum*, Ruprecht.
- 37 *Americanum*, Corn.
- 39 *capillus-veneris*, Desvauz,  
Koch, Ledebour, J. Smith,  
Brackenridge, Mettenius.
- 39 *Moritzianum*, Fee.
- Mr. Moore describes three  
other forms, namely,—Var.  
*dissectum*, Galleotti, var. *la-  
tissimum*, Kunze, var. *emar-  
ginatum*, Desvauz, (the *A.*



PAGE.

- emarginatum of *Bory, Presl, Sprengel, Hooker, and Fee.*
- 45 pulverulentum, *Schkuhr, Moore, Sprengel, Desvauz, Raddi, Kaulfuss, Klotzsch, Presl, Kunze, Fee.*
- 45 Kunzeanum, (not of *Klotz.*)
- 45 Berterianum, *Balbis, Kaulf.*
- 45 rigidum, (not of *Presl* nor *Link.*)
- 47 villosum, *Sprengel, Moore, Desvauz, Presl, Martens & Galleotti, Hooker, Kunze, and Fee.*
- 47 lanceolatum, *Fee.*
- 47 acuminatum, *Desvauz, Spr.*
- 47 var. falcatum, (*A. falcatum* of *Swarz, Willdenow, Spr., Desvauz, Hooker, and Fee.* (Found also in West Indies, Jamaica, Trinidad, Cuba, St. Vincent, Guiana, Surinam, Mexico, and New Grenada.)
- 51 intermedium, *Spr., Moore.*
- 51 ternatum, *Brackenridge.*
- 53 cultratum, *Moore.*
- 55 cristatum, *Sprengel, Desv., Kunze, in part.*
- 55 striatum, *Willdenow, Spr., Desvauz, Presl, (not of Hooker, Schkuhr, Sieber, or Swartz.)*
- 63 Onychium Japonicum of *Kunze, Moore, and J. Smith.*)
- 63 lucidum, (not of *Sprengel* nor *Hooker.*)
- 63 capense, *Kaulfuss.*
- 63 Trichomanes Japonicum, *Thunberg.* Native of Japan.
- 67 Pellæa rotundifolia, *Hooker.*  
(See also pages 155 to 162, vol. iv., for other synonymes of the various species of *Platyloma* and *Pteris.*)
- 69 Pteris ternifolia, *Moore.*
- 69 Pellæa ternifolia, *Hooker.*
- 71 Pellæa flexuosa, *Hooker.*

PAGE.

- 73 Pellæa calomelanos, *Hooker.*
- 73 Pteris calomelanos, *Hooker.*
- 75 geraniifolia, *Moore.*
- 77 cordata, *Cavanilles, Swartz.*
- 85 Cheilanthes intramarginalis, *Hooker, Moore.*
- 85 prionopteris, *A. Braun.*
- 85 Pteris fallax, *Martens and Galleotti.*
- 87 hastata, *Moore.*
- 89 Pellæa hastata, var. macrophylla, *Hooker.*
- 87 Cheilanthes hastata, var. macrophylla, *Kunze.*
- 87 macrophylla, *Kunze.*
- 89 Pteris hastata, var. macrophylla, *Mettenius, Moore.*
- 93 Allosorus crispus, *Mettenius, J. Smith, Hooker, Ledebour, Koch.*
- 93 minutus, *Turcz.*
- 93 Pteris minuta, *Turcz.*
- 93 Cryptogramme crispa, *Hooker, J. Smith.*
- 93 acrostichoides, *Brown.*
- 93 Brunoniana, *Wallich, Hooker and Greville, Mettenius.*
- 93 Gymnogramme Brunoniana, *Presl.*
- 93 Phorolobus Brunonianus, *Fee.*
- 93 Blechnum crispum, *Hartmann.*
- 93 Riedlea crispa, *Mirbel.*
- 93 Stegania crispa, *R. Brown.*
- 93 Struthiopteris crispa, *Wallroth.*
- 99 Pteris pedata, *Hooker.*
- 99 palmata, *Willdenow.*
- 99 collina, *Raddi.*
- 99 varians, *Raddi.*
- 99 Mysurensis, *Wallich.*
- 99 polytoma, *Kunze.*
- 99 Cassebeera pedata, *J. Smith.*
- 99 Litobrochia pedata, *Moore.*
- 101 Pteris sagittifolia, *Hooker.*
- 101 hasta, *Raddi, Hooker.*
- 101 Litobrochia sagittæfolia, *Moore.*
- 103 Litobrochia palmata, *Moore.*
- Sir W. J. Hooker makes this

PAGE.		PAGE.	
	Fern a form of <i>Doryopteris pedata</i> , under the name of <i>Pteris pedata</i> .	115	<i>Pteris arguta</i> , <i>Swartz</i> , <i>Hooker</i> , <i>Agardh</i> , <i>Webb</i> , <i>Schl.</i> , <i>Seuber</i> .
105	<i>collina</i> , <i>Moore</i> . Sir W. J. Hooker places this Fern also as a form of <i>D. pedata</i> .	115	<i>flabellata</i> , <i>Thunberg</i> , <i>Hooker</i> , <i>Swartz</i> , <i>Willdenow</i> , <i>Agardh</i> , (not of <i>Schkuhr</i> .)
113	<i>Pteris serrulata</i> , <i>Hooker</i> , <i>Swartz</i> , (not of <i>Forskal.</i> )	115	<i>elegans</i> , <i>Jacquin</i> .
115	<i>arguta</i> of <i>Aiton</i> , and <i>Pteris flabellata</i> of <i>Thunberg</i> , are evidently forms of the same Fern.	115	<i>lata</i> , <i>Link</i> .
115	<i>serrulata</i> , <i>Forskal.</i>	115	<i>Ascensionis</i> , <i>Swartz</i> , <i>Schkuhr</i> , <i>Willdenow</i> .
		115	<i>Lonchitis Ascensionis</i> , <i>Forster</i> . The illustration is that of the form " <i>flabellata</i> ."
		117	<i>Pteris longifolia</i> , <i>Hooker</i> .

## VOL. IV.

PAGE.		PAGE.	
15	<i>Pteris aspericaulis</i> , <i>Moore</i> .	47	<i>Cheilanthes tenuifolia</i> , <i>Moore</i> .
17	<i>semipinnata</i> , <i>Moore</i> , <i>Hooker</i> .	49	<i>elegans</i> , <i>Moore</i> .
19	<i>scaberula</i> , <i>Moore</i> .	53	<i>Sieberi</i> , <i>Moore</i> .
25	<i>Hypolepis tenuifolia</i> , <i>Bernhardi</i> , <i>Moore</i> , <i>J. Smith</i> , <i>Hooker</i> , <i>Presl</i> .	61	<i>multifida</i> , <i>Moore</i> .
25	<i>repens</i> , of <i>Gardens</i> , (not of <i>Hooker</i> , <i>Presl</i> , <i>Link</i> , <i>Moore</i> , <i>Fee</i> , <i>J. Smith</i> , <i>Bauer</i> , <i>Sieber</i> , or <i>Plumier</i> .)	63	<i>cuneata</i> , <i>Moore</i> .
25	<i>Dicksonioides</i> , of <i>Gardens</i> .	67	<i>Preissiana</i> , <i>Moore</i> .
25	<i>Lonchitis tenuifolia</i> , <i>Forster</i> .	71	<i>Doodia aspera</i> , <i>A. Cunningham</i> .
25	<i>Cheilanthes arborescens</i> , <i>Swartz</i> .	71	<i>Woodwardia aspera</i> , <i>Mettenius</i> .
25	<i>dissecta</i> , <i>Hooker</i> & <i>Arnott</i> .	73	<i>Doodia caudata</i> , <i>Hooker</i> .
25	<i>pellucida</i> , <i>Colenso</i> . The above Fern, of which a coloured plate has been given, is distinct from the <i>Hypolepis repens</i> of <i>J. Smith</i> , <i>Hooker</i> , <i>Moore</i> , etc., (which is the <i>Lonchitis repens</i> of <i>Linnaeus</i> , and <i>Cheilanthes repens</i> of <i>Kaulfuss</i> .)	73	<i>Woodwardia caudata</i> , <i>Swartz</i> , <i>Cavanilles</i> , <i>Willd.</i> , <i>Mettenius</i> .
31	<i>argentea</i> , <i>Moore</i> .	75	<i>Doodia media</i> , <i>Hooker</i> .
37	<i>chlorophylla</i> , <i>Moore</i> .	75	<i>Kunthiana</i> , <i>Gaudichaud</i> .
43	<i>fragrans</i> , <i>Moore</i> .	75	<i>Woodwardia lunulata</i> , <i>Mettenius</i> .
		77	<i>Doodia blechnoides</i> , <i>Hooker</i> .
		81	<i>Blechnum trifoliatum</i> , <i>Kaulfuss</i> .
		83	<i>hastatum</i> , <i>Kunze</i> , <i>Hooker</i> & <i>Arnott</i> .
		83	<i>auriculatum</i> , <i>Cavanilles</i> , <i>Swartz</i> , <i>Willdenow</i> .
		83	<i>Lomaria hastata</i> , <i>Mettenius</i> , <i>Philippi</i> .
		83	<i>blechnoides</i> , <i>Bory</i> .
		83	<i>pubescens</i> , <i>Kunze</i> , <i>Hooker</i> .
		83	<i>Mesothema remotum</i> , <i>Presl</i> .

- | PAGE. |  | PAGE. |  |
|-------|--|-------|--|
| 83    | <i>Blechnum remotum</i> , Presl.   | 101   | <i>Blechnopsis cartilagineum</i> , Presl.  |
| 85    | polypodioides, Mettenius,<br>Hooker, Moore.  | 103   | <i>Blechnum serrulatum</i> , Hooker,<br>Michaux, Swartz, Willdenow,<br>Klotzsch, Mettenius.                                  |
| 85    | scabrum, Liebmann.   | 103   | angustatum, Schrader.  |
| 85    | <i>Asplenium blechnoides</i> , Swartz.   | 103   | <i>Blechnopsis serrulata</i> , Presl.  |
| 87    | <i>Blechnum triangulare</i> , Hooker,<br>Metténus.   | 107   | <i>Woodwardia auriculata</i> , Blume.  |
| 89    | gracile, Hooker, Martens &<br>Galleotti, Klotzsch, Bracken.<br>(Found also in Peru and<br>Mexico.) | 107   | Chamissoi, Brackenridge.   |
| 91    | intermedium, Moore, Hooker,<br>Metténus.   |       | Also found in Spain, (I found<br>it at Loscorrales, amongst damp<br>rocks,) Portugal, Italy, Ischia,<br>Java, and Guatemala. |
| 91    | longifolium, (not of Hooker<br>or Fee.)  | 109   | <i>Woodwardia Virginica</i> , Hooker.  |
| 93    | Brasiliense, Moore, Hooker,<br>Metténus.   | 109   | thelypteroides, Ph.  |
| 93    | var. corcovadense, Moore.  | 111   | areolata, Moore, Hooker.   |
| 95    | occidentale, Swartz, Willd.,<br>Metténus.  | 111   | angustifolia, Gray, Metten.  |
| 95    | cartilagineum, Schkuhr.  | 121   | <i>Brainea insignis</i> , Moore.   |
| 95    | pectinatum, Hooker.  | 125   | <i>Lomaria Patersoni</i> , Hooker,<br>Sprengel, Schkuhr.   |
| 95    | glandulosum, Link, Presl,<br>Kaulfuss, Wallich, Kunze.   | 125   | <i>Blechnum Patersoni</i> , Mettenius.   |
| 95    | Pohlianum, Presl.  | 129   | <i>Lomaria alpina</i> , Brackenridge.  |
| 95    | fasciculatum, (?) Presl.   | 129   | polypodioides, Gaudichaud.   |
| 95    | cognatum, Presl.   | 129   | Australis, Kunze, Gay.   |
| 95    | distans, Presl.  | 129   | microphylla, Goldm.  |
| 95    | meridionale, Presl.  | 129   | linearis, Colenso.   |
| 95    | <i>Lomaria campylotis</i> , Kunze,<br>Klotzsch.  | 129   | <i>Blechnum alpinum</i> , Mettenius.   |
| 96    | <i>Mesothema campylotis</i> , Presl.   | 129   | <i>Lomaria Gayana</i> , Fee.   |
| 97    | <i>Blechnum orientale</i> , Hooker,<br>Swartz, Willdenow, Blume,<br>Metténus.                      | 129   | Sellowiana, Presl.   |
| 97    | salicifolium, Kaulfuss.  | 129   | Pœppigianum, Sturm.  |
| 97    | imbricatum, Blume.   | 129   | trichomanoides, Desvoux.   |
| 97    | <i>Blechnopsis Cumingiana</i> , Presl.   | 129   | <i>Acrostichum polypodioides</i> , Du<br>Petit-Thouars.  |
| 97    | latifolia, Presl.  | 129   | <i>Polypodium pinna-marina</i> ,<br>Poirét.  |
| 97    | pyrophyllum, Blume.  | 131   | <i>Lomaria spicant</i> , Hooker,<br>Pappe and Rawson.  |
| 97    | orientalis, Presl.   | 135   | punctulata, Hooker, Pappe<br>and Rawson, Moore.  |
| 97    | elongata, Presl.   | 135   | densa, Sieber.   |
| 97    | stenophylla, Presl.  | 135   | auriculata, Blume.   |
| 97    | pyrophylla, Presl.   | 135   | <i>Blechnum punctulatum</i> , Willd.,<br>Metténus.   |
| 97    | agrostidifolium, Goldm.  | 135   | tricuspe, Kaulfuss.  |
| 101   | <i>Blechnum cartilagineum</i> , Brown,<br>Hooker, Willdenow, Sieber.                               | 135   | rigidum, Ecklon.   |
|       |  | 135   | <i>Atherstoni</i> , (?) Pappe and<br>Rawson.   |
|       |  | 135   | <i>Onychium Krebsii</i> , Kunze.   |

PAGE.

- 135 *Scolopendrium Krebsii*, *Kunze*,  
*Fee*, *J. Smith*, *Mettenius*,  
*Pappe* and *Rawson*.  
 Sir W. J. Hooker considers  
 that the *S. Krebsii* of *Kunze*  
 is an abnormal form of *Lo-*  
*maria punctulata*. I have  
 therefore included the synon-  
 ymes *Scolopendrium Krebsii*  
 of *Kunze*, etc., *Onychium*  
*Krebsii* of *Kunze*, and *Blechnum*  
*Atherstoni* (?) of *Pappe*  
 and *Rawson*, which will really  
 belong to the *S. Krebsii*, vol. v.
- 137 *Blechnum Gilliesii*, *Moore*.  
 Sir W. J. Hooker, after pro-  
 found research on the species  
*Lomaria procera*, has come to  
 the conclusion that the *L.*  
*Gilliesii*, *L. procera*, and *L.*  
*Capensis* of this work are  
 forms of the same species. I  
 therefore include under the  
 head *Lomaria procera*, these  
 additional synonymes for these  
 Ferns.
- 137 *Lomaria procera*, *Cunningham*,  
*Brackenridge*.
- 137 *latifolia*, *Colenso*.  
 137 *Capensis*, *Rawson & Pappe*.  
 137 *Chilensis*, *Kaulfuss*, *Hooker*,  
*Gay*.  
 137 *spectabilis*, *Liebmann*, *Rich.*  
 137 *lineata*, *Willdenow*.  
 137 *striata*, *Willdenow*.  
 137 *Blechnum Capense*, *Schlecht.*  
 137 *Chilense*, *Mettenius*, *Sturm*.  
 137 *Onoclea procera*, *Sprengel*.  
 For a detailed description of  
 this Fern the reader is refer-  
 red to page 24, vol. iii., of Sir  
 W. J. Hooker's "Species  
*Filicum*." Let it suffice to  
 mention that Sir William  
 Hooker includes under *Lo-*  
*maria procera*, the following:
- 137 *Stegania minor*, *Brown*.

PAGE.

- 137 *Stegania exigua*, *Colenso*.  
 137 *Lomaria imbricata*, *Colenso*.  
*New Zealand*.  
 137 *Capensis*, of *Authors*.  
*Cape of Good Hope*.  
 137 *vestita*, *Blume*.  
*Malay Islands*.  
 137 *lineata*, of *Authors*.  
 137 *striata*, of *Authors*.  
*West Indies*.  
 137 *longifolia*, *Schlechtendal*.  
 137 *danæacea*, *Kunze*.  
 137 *ensiformis*, (?)  
 137 *falciformis*, *Liebmann*.  
 137 *spectabilis*, *Liebmann*.  
 137 *Schiediana*, *Presl*.  
 137 *arborescens*, *Klotzsch* and  
*Karsten*.  
 137 *stenophylla*, *Klotzsch*.  
 137 *ornifolia*, *Presl*.  
 137 *Brasiliensis*, *Raddi*.  
 137 *Chilensis*, *Kaulfuss*.  
 137 *Gilliesii*, *Hooker*.  
*Mexico*, *Guatemala*, *Peru*,  
*Columbia*, *Caraccas*, *Brazil*,  
*Venezuela*, *Chili*, *Juan Fer-*  
*nandez*, etc.
- 141 *Lomaria discolor*, *Hooker*,  
*Moore*.  
 141 *Stegania discolor*, *A. Richard*.  
 141 *falcata*, *Brown*.  
 141 *nuda*, *Brown*.  
 141 *Onoclea nuda*, *Labillardiere*.  
 141 *Lomaria lanceolata*, *Hooker*.  
*Native of New Zealand*.  
 143 *Blechnum Australe*, *Hooker*,  
*Moore*, *Schkuhr*, *Willdenow*,  
*Kaulfuss*, *Mettenius*.  
 143 *Lomaria pumila*, *Pappe* and  
*Rawson*.  
 143 *Mesothema Australe*, *Presl*.  
 147 *Lomaria lanceolata*, *A. Cunning*.  
 147 *obtusata*, *Labillardiere*.  
 149 *Magellanica*, *Hooker*, *Gay*,  
*Brackenridge*, *Bory*.  
 149 *Blechnum Magellanicum*, *Sturm*,  
*Mettenius*.

PAGE.		PAGE.	
149	<i>Lomaria Boryana</i> , <i>Pappe and Rawson</i> .	149	<i>Blechnum cycadifolium</i> , <i>Sturm</i> .
149	<i>coriacea</i> , <i>Schrader</i> , not of <i>Kunze</i> .)	149	<i>Pteris palmæformis</i> , <i>Thouars</i> .
149	<i>cinnamomea</i> , <i>Kaulfuss</i> .	149	<i>Lomaria lanuginosa</i> , <i>Kunze</i> .
149	<i>Ryani</i> , <i>Kaulfuss</i> . <i>Kunze</i> .	149	<i>Schottii</i> , <i>Colla</i> .
149	<i>rufa</i> , <i>Sprengel</i> .	149	<i>Ceterach Magellanica</i> , <i>Pernetty</i> .
149	<i>cycadifolia</i> , <i>Colla</i> .	151	<i>Lomaria L'Herminieri</i> , <i>Hooker</i> .
		151	<i>Blechnum L'Herminieri</i> , <i>Metten</i> .

## VOL. V.

PAGE.		PAGE.	
3	<i>Asplenium monanthemum</i> , <i>Hooker, Webb, Brackenridge,</i> <i>Mettenius, Sprengel, Desvauz,</i> <i>Presl, Klotzsch, Liebmann,</i> <i>Pappe and Rawson, Sturm.</i>	9	<i>Pteris septentrionalis</i> , <i>Smith</i> .
3	<i>inæquilaterale</i> , <i>Martens and Galleotti</i> .	9	<i>Blechnum septentrionale</i> , <i>Wallroth</i> .
3	<i>leptophyllum</i> , <i>Fee</i> .	9	<i>Asplenium bifurcatum</i> , <i>Opiz</i> .
3	<i>blandulum</i> , <i>Fee</i> .	9	<i>furcatum</i> , <i>Jacquemenot</i> .
3	<i>dentex</i> , <i>Buchanan</i> .	9	<i>Belvisia septentrionalis</i> , <i>Mirbel</i> .
3	<i>Galleotti</i> , <i>Fee</i> .	11	<i>Asplenium Germanicum</i> , <i>Presl,</i> <i>Deakin, Lamarck, Sprengel,</i> <i>Desvauz, Rupr., Sturm</i> .
3	<i>Menziesii</i> , <i>Mettenius</i> , <i>Hooker and Greville</i> .	11	<i>alternifolium</i> , <i>Wahl., Fries</i> , (not of <i>Mettenius</i> .)
3	<i>intermedium</i> , <i>Moritz</i> .	11	<i>Breynii</i> , <i>Fries, Ledebour,</i> <i>Koch, Mettenius</i> .
3	<i>macrocarpum</i> , <i>Desvauz,</i> <i>Mettenius</i> .	11	<i>Scolopendrium alternifolium</i> , <i>Roth</i> .
3	<i>obtusissimum</i> , <i>Fee</i> .	11	<i>Phyllitis heterophylla</i> , <i>Mench</i> .
3	<i>unilaterale</i> , var., <i>Desvauz</i> .	11	<i>Tarachia Germanica</i> , <i>Presl</i> .
5	<i>flabellifolium</i> , <i>Hooker,</i> <i>Willdenow, Mettenius</i> .	11	<i>Asplenium murale</i> , var., <i>Bernh</i> .
7	<i>ebeneum</i> , <i>Hooker, Swartz,</i> <i>Willdenow, A. Gray, Pappe</i> <i>and Rawson, Mettenius</i> .	11	<i>ruta-muraria</i> , var., <i>Bernh</i> .
7	<i>trichomanoides</i> , <i>Michaux</i> .	15	<i>Asplenium lucidum</i> , <i>Hooker,</i> <i>Swartz, Willdenow, Poiret,</i> <i>Sprengel, Desvauz, Metten</i> .
7	<i>parvulum</i> , <i>Martens &amp; Galle</i> .	15	<i>subcaudatum</i> , <i>Cavanilles</i> .
7	<i>resiliens</i> , <i>Kunze</i> .	15	<i>Lyalli</i> , <i>Moore</i> .
7	<i>Acrostichum platyneuron</i> , <i>Linn</i> .	15	<i>scleroprium</i> , <i>Brackenridge,</i> <i>Humboldt</i> .
9	<i>Asplenium septentrionale</i> , <i>Koch,</i> <i>Deakin, Ledebour, Desvauz,</i> <i>Mettenius, Willdenow</i> .	15	<i>lucidum</i> , var. <i>paucifolium</i> , <i>Hooker</i> .
9	<i>Acrostichum laciniatum</i> , <i>Gilib</i> .	15	var. <i>Lyallii</i> , <i>Hooker</i> .
		15	<i>obliquum</i> , <i>Forster, Schkuhr,</i> <i>Willdenow, Poiret, Sprengel</i> .

PAGE.

- Desvauz, Richard, Presl, Kunze, Fee, Wallich*, in part.  
New Zealand, Norfolk Island,  
and the Pacific Islands.
- 17 *Veitchianum, Moore.*
- 19 *obtusatum, Moore, Hooker, Willdenow, Brown, Mettenius, Labillardiere*, (not of *Bory.*)
- 19 *decurrens, Willdenow.*
- 19 *sarmentosum, Willdenow, Poiret, Presl, Fee.*
- 19 *chondrophyllum, Berthelot, Klotzsch, Sturm.*
- 19 *consimile, Gay, Remy.*
- 19 *obtusatum, var. obliquum, Hooker.*
- 19 *obliquum, Forster, Schkuhr, Mettenius, Labillardiere.*
- 19 *saxosum, Colenso.*
- 19 *sphenoides, Kunze.*
- 19 *apicidentatum, Homb.*
- 19 *lucidum, var. obliquum, Moore.*
- 19 *obtusatum, var. difforme, Hooker.*
- 19 *difforme, Brown, Endlicher, Mettenius.*
- 21 *hemionitis, Moore, J. Smith, Hooker, Linneus*, (not of *Cavanilles, Lamarck*, or *Swartz.*)
- 21 *palmatum, Webb, Desvauz, Cavanilles, Loddiges, Heuft., Brackenridge.*
- 21 *Tarachia palmata, Presl.*
- 23 *Asplenium præmorsum, Moore, Sprengel, Klotzsch, Desvauz, Willdenow*, (not of *Blume* or *Pappe and Rawson.*)
- 23 *Canariense, Poiret, Presl, Sprengel, J. Smith, Hooker, Fee, Webb and Berthelot, Brackenridge.*
- 23 *cicutarium, Roxburgh, Mett.*, (not of other authors.)
- 23 *furcatum, Schlechtendal, Wallich.*

PAGE.

- 23 *Asplenium geminaria, Bory, Desvauz.*
- 23 *hirsutum, Heyne, Wallich.*
- 23 *luridum, Brouss.*
- 23 *maderene, Penny, Kunze.*
- 23 *nigricans, Kunze, Presl, Fee.*
- 23 *obtusilobum, Desvauz.*
- 23 *Tarachia geminaria, Presl.*
- 23 *nigricans, Presl.*
- 23 *Asplenium præmorsum, var. furcatum, Moore.*
- 23 *furcatum, Swartz, Sprengel, Willdenow, Desvauz, Blume, Link, Kunze, Schlechtendal, Presl, Martens and Galleotti, Kaufuss, Liebmann, Fee, Brackenridge, Pappe and Rawson, Mettenius.*
- 23 *cuspidatum, Solander.*
- 23 *dentex, Solander.*
- 23 *fragrans, Schkuhr.*
- 23 *strictum, Bory.*
- 23 *Acrostichum filare, Forskal, Swartz, Mettenius, Poiret.*
- 23 *var. validum, Moore.*
- 23 *var. latum, Moore.*
- 23 *Tarachia Browniana, Presl.*
- 23 *furcata, Presl.*
- 23 *Asplenium adiantoides, Lamarck.*
- 23 *cuneatum, Wight.*
- 23 *falsum, Retzius.*
- 23 *furcatum, Schkuhr.*
- 23 *mascareinense, Desvauz.*
- 23 *mysurense, Roth, Wallich, Sprengel.*
- 23 *tripartitum, Blume.*
- 23 *Tarachia furcata, var., Presl.*
- 27 *Asplenium serra, Willdenow, Hooker, Mettenius, Poiret, Sprengel, Desvauz, Klotzsch, Galleotti, Liebmann.*
- 27 *var. Woodwardioides, Gardner.*
- 27 *Pœppigii, Presl.*
- 27 *insigne, Liebmann.*
- 27 *Woodwardioides, Gardner.*

- |   |   |
|---|---|
| <p>PAGE.</p> <p>Tropical America, Jamaica, Cuba, Guadeloupe, Caraccas, Venezuela, Peru, Dominica, and Mexico.</p> <p>29 viviparum, <i>Hooker, Hombr., Mettenius.</i></p> <p>29 fœniculaceum, (not of <i>H. B. K.</i>)</p> <p>31 fragrans, <i>Willdenow, Poir., Sprengel, Desvauz, Presl, Moore, Kunze, Fee</i>, (not of <i>Hooker</i> or <i>Schkuhr.</i>)</p> <p>31 planicaule, <i>Lowe</i>, (not of <i>Wallich, Moore &amp; Houlston</i>, or <i>J. Smith.</i>)</p> <p>31 truncatum, (cancelled.)</p> <p>31 Mexicanum, (cancelled.)</p> <p>West Indies—Jamaica, Cuba, Brazil, Quito, etc.</p> <p>33 bulbiferum, <i>Swartz, Poir., Willdenow, Richard, Hooker, Mettenius, Brackenridge</i>, (not of <i>Bernhardi.</i>)</p> <p>35 rhizophorum, <i>Linnaeus, Hooker, Mettenius.</i></p> <p>35 cirrhatum, <i>Richard.</i></p> <p>35 Karstenianum, <i>Klotzsch.</i></p> <p>35 mastigophyllum, <i>Fee.</i></p> <p>35 cyrtopteron, <i>Kunze, Metten.</i></p> <p>35 flabellulatum, <i>Mettenius, Kunze, Klotzsch.</i></p> <p>35 rachirhizon, <i>Raddi.</i></p> <p>35 uniseriale, <i>Raddi.</i></p> <p>35 amabile, <i>Liebmann.</i> (Not <i>Diplazium radicans</i> of <i>Presl.</i>)</p> <p>37 radicans, (not of <i>Swartz</i> or <i>Moore and Houlston.</i></p> <p>37 rhizophorum, <i>Willdenow, Moore, Lamarck, Sprengel, Desvauz, Smith, Galleotti, Fee.</i></p> <p>37 alloopteron, <i>Kunze, Fee.</i></p> <p>37 cyrtopteron, <i>Kunze, Moore, J. Smith, Mettenius.</i> West Indies and South America. Not <i>Asplenium bulbiferum</i> of <i>Bernhardi</i>, or <i>Diplazium radicans</i> of <i>Presl.</i></p> | <p>PAGE.</p> <p>39 <i>Asplenium Brasiliense, Heward, Link, Moore, Kunze, J. Smith</i>, (not of <i>Desvauz</i> or <i>Swartz.</i>)</p> <p>39 auricularium, <i>Desvauz, Fee, Presl, Klotzsch, Kunze.</i></p> <p>39 dimidiatum, (not of authors.)</p> <p>39 pulchrum, <i>Wallich.</i></p> <p>39 Raddianum, <i>Gaudichaud.</i></p> <p>39 regulare, <i>Swartz, Sprengel, Presl, Fee, Kunze.</i></p> <p>39 tenerum, <i>Kunze.</i></p> <p>39 triste, <i>Kaulfuss.</i></p> <p>See also remarks for page 121, Appendix.</p> <p>39 zamiaefolium, <i>Willdenow, Kunze, Loddiges.</i></p> <p>39 caryotoides, <i>Presl.</i></p> <p>41 tenellum, <i>Roxburgh, Moore</i>, (not of <i>Banks and Fee.</i>)</p> <p>41 erectum, var., <i>Hooker.</i></p> <p>41 lunulatum, var., <i>Mettenius.</i></p> <p>41 pavonicum, <i>Brackenridge, Mettenius.</i></p> <p>41 radicans, <i>Pritchard.</i></p> <p>Ascension Island and Sandwich Isles.</p> <p>45 serratum, <i>Swartz, Lamarck, Willdenow, Schkuhr, Presl, Sprengel, Desvauz, J. Smith, Fee, Kunze, Moore, Splitzg., Descourt, Mettenius, Hooker.</i></p> <p>45 var. crenulatum, (pl. xiv B.)</p> <p>45 crenulatum, <i>Presl, Kunze, Link, Klotzsch, Brackenridge, J. Smith, Moore.</i></p> <p>45 integrum, <i>Fee.</i></p> <p>45 serratum, <i>Link, Arrabida, J. Smith.</i></p> <p>45 Schomburgkianum, <i>Klotzsch, Fee.</i></p> <p>49 brachypteron, <i>Moore.</i></p> <p>49 <i>Darea coarctata, Bojer.</i></p> <p>51 <i>Asplenium compressum, Hooker, Willdenow, Mettenius.</i></p> <p>51 <i>Darea fœcunda, Fee.</i></p> <p>53 <i>Asplenium dimorphum, Moore.</i></p> <p>55 appendiculatum, of this work</p> |
|---|---|

PAGE.

- is named by *Moore* as *A. bulbiferum*, var. *appendiculatum*, to which are added as synonymes:—
- 55 *laxum*, *Gaudichaud*, *Hombr.*,  
*J. Smith.*
- 55 *bulbiferum*, var. *laxum*,  
*Hooker.*
- 55 *scariosum*, *Colenso.*
- 57 *flaccidum*, *Bernhardi*,  
*Hooker*, *Brackenridge.*
- 57 *odontites*, *R. Brown*, *Presl*,  
*J. Smith*, *Kunze.*
- 57 *appendiculatum*, var. *angustifolium*, *Müller.*
- 57 *collinum*, *Colenso.*
- 57 *heterophyllum*, *Richard*,  
(not of *Presl* or *Zippel*.)
- 57 *Cænopteris Novæ-Zeelandiæ*,  
*Sprengel*, *Schkuhr.*
- 57 *odontites*, *Thunberg*, *Presl*,  
*Swartz*, *Schkuhr*, *Desvauz*,  
*Sprengel.*
- 57 *Darea odontites*, *Willdenow*,  
*Poiret*, *Fee*, *Schlechtendal.*
- 59 *Asplenium cicutarium*, *Sprengel*,  
*Schlechtendal*, *Martens* and  
*Galleotti*, *Liebmann*, *Fee*,  
*Klotzsch*, *Mettenius*, *Link*,  
(not of *Kunth* or *Roxburgh*.)
- 59 *confusum*, *Kunze.*
- 59 *cristatum*, *Lamarck*, (not of  
*Desvauz*, *Brackenridge*, or  
*Wallich*.)
- 59 *dissectum*, *Link*, (not of  
*Brackenridge*, *Gmelin*, *Poiret*,  
*J. Smith*, or *Nuttall*.)
- 59 *Athyrium Hænkeanum*, *Presl.*
- 59 *Cænopteris dissecta*, *Kunze.*
- 59 *Polypodium geraniifolium*,  
*Poiret.*
- West Indies, Trinidad, Cuba,  
Antigua, Mexico, Columbia,  
Venezuela, New Grenada,  
Caraccas, Quito, Peru, Brazil.
- 61 *Asplenium lætum*, *Hooker*,  
*Willdenow*, *Mettenius.*

PAGE.

- 61 *Asplenium Schkuhrianum*,  
*Mettenius*, *Klotzsch.*
- 61 *abscissum*, *Willdenow*,  
*Klotzsch*, *Moore.*
- 61 *bidentatum*, *Kunze.*
- 61 *virens*, *Desvauz.*
- 61 *drepanophyllum*, *Kunze.*
- 63 *fontanum*, *Mettenius.*
- 63 *Halleri*, *Link*, *Ledebour*,  
*Koch*, *Kunze.*
- 63 *Aspidium Halleri*, *Poiret.*
- 63 *Athyrium fontanum*, *Desvauz.*
- 63 *Halleri*, *Mettenius.*
- 63 *Polypodium fontanum*, *Poiret.*
- 65 *Asplenium trichomanes*, *Swartz*,  
*Lamarck*, *Michaux*, *Sadler*,  
*Koch*, *Fries*, *Ledebour*, *Link*,  
*Wallich*, *Pappe* and *Rawson*,  
*Kunze*, *Mettenius*, *Nyman*,  
*Heuff.*
- 65 *adiantum-nigrum*, *Lumn.*,  
(not of other authors.)
- 65 *dichroum*, *Kunze*, *Presl.*
- 65 *elachophyllum*, *Muell.*
- 65 *melanocaulon*, *Poiret*, *Link*,  
*Kunze*, *Klotzsch*, *Martens* &  
*Galleotti*, *Liebmann.*
- 65 *microphyllum*, *Tineo.*
- 65 *Newmani*, *Bolle.*
- 65 *Phyllitis rotundifolia*, *Mæench.*
- 65 *Asplenium Harovii*, *Godr.*
- 73 *angustifolium*, *Hooker*, *Suz.*,  
*Willdenow*, *Gray.*
- 79 *lanceolatum*, *Swartz*, *Poiret*,  
*Desvauz*, *Rupr.*, (not of  
*Forsk.*.)
- 79 *Athyrium lanceolatum*, *Heuff.*
- 79 *Tarachia lanceolata*, *Presl.*
- 79 *Asplenium lanceolatum*,  
var. *elegans*, *Hooker.*
- 79 var. *obovatum*, *Moore.*
- 79 *obovatum*, *Viviani*, *Sprengel*,  
*Link*, *Gussoni*, *Hooker* and  
*Greville*, *Kunze.*
- 79 *Forsteri*, *Sadler.*
- 79 *novum*, *Sadler.*
- 79 *Athyrium obovatum*, *Fee.*



## PAGE.

- 79 *Cystopteris obovata*, *Hooker*,  
*Presl.*
- 79 *Asplenium lanceolatum*,  
var. *microdon*, *Moore.*
- 79 *microdon*, *Moore.*
- 79 *marinum*, var. *microdon*,  
*Moore.*
- 81 *ruta-muraria*, *Swartz*, *Fries*,  
*Lamarck*, *Opiz*, *Sprengel*,  
*Desvauz*, *Link*, *Ledebour*,  
*Koch*, *Mettenius*, *Pappe* and  
*Rawson*, (not of *Wallich.*)
- 81 *Matthioli*, *Gaspar*, *Gussoni.*
- 81 *pygmæum*, *Linnaeus.*
- 81 *Acrostichum ruta-muraria*,  
*Lamarck*, *Poirot.*
- 81 *Phyllitis ruta-muraria*, *Manch.*
- 81 *Asplenium leptophyllum*,  
*Schultz.*
- 81 *ruta-muraria*, var. *elatum*,  
*Moore.*
- 81 *multicaule*, *Presl.*
- 81 var. *zoliense*, *Moore.*
- 81 *zoliense*, *Kitaib*, *Sadler.*
- 83 *viride*, *Schkuhr*, *Desvauz*,  
*Poirot*, *Fries*, *Koch*, *Sturm*,  
*Ledebour*, *Sadler*, *Nyman*,  
*Mettenius.*
- 83 *intermedium*, *Presl.*
- 91 *pulchellum*, *Moore*, *Kunze*,  
*Gaudichaud*, *Brackenridge*,  
*Mettenius*, *Hooker*, (not of  
*Wallich.*)
- 91 var. *otites*, *Mettenius*, (the  
form figured plate xxxi.)
- 91 *otites*, *Link*, *Mettenius*,  
*Kunze.*
- 91 *pulchellum*, *Moore* and  
*Houlston.*
- 91 *obtusifolium*, *Foreign Gard.*
- 93 *pumilum*, *Sprengel*, *Desvauz*,  
*Poirot*, *Hooker*, *Mettenius*,  
*Presl*, *Klotzsch*, *Fee.*
- 93 *heterophyllum*, *Mettenius*,  
*Presl.*
- 93 *humile*, *Sprengel*, *Desvauz.*
- 93 *hymenophylloides*, *Fee.*

## PAGE.

- 93 *Asplenium minimum*, *Martens*  
and *Galleotti.*
- 93 *Schimperianum*, *Hochst.*
- 93 *tenerrimum*, *Hochst.*
- 93 *Tarachia pumila*, *Presl.*
- 99 *Asplenium falcatum*, *Retzius*,  
*Swartz*, *Willdenow*, *Brown*,  
*Sprengel*, *Desvauz*, *Moore*,  
*Presl*, *Wallich*, *Richard*,  
*Kunze*, *Endlicher*, *Fee*, *J.*  
*Smith*, (not of *Richard*, *Martens*  
and *Galleotti.* *Don*, or  
*Thunberg.*)
- 99 *cultratum*, *Gaudichaud*, (not  
of *Sieber.*)
- 99 *cultrifolium*, *Roxburgh*, (not  
of *Linnaeus*, *Willdenow*,  
*Sieber*, or *Klotzsch.*)
- 99 *discolor*, *Colenso*, (not of  
*Kunze*, or *Pappe & Rawson.*)
- 99 *distans*, *Colenso*, (not of *Fee*,  
*Don*, or *Brackenridge.*)
- 99 *erosum*, of *Gardens*, (not of  
*Linnaeus*, *Lamarck*, *Sprengel*,  
*Willdenow*, *Desvauz*, *Presl*,  
or *Wallich.*)
- 99 *Forsterianum*, *Colenso.*
- 99 *intermedium*, *Kaufuss*, *Fee*,  
*Sprengel*, (not of *Presl* or  
*Blume.*
- 99 *polyodon*, *Swartz*, *Poirot*,  
*Willdenow*, *Sprengel*, *Kunze*,  
*Desvauz*, *Hooker*, (not of  
*Wallich.*)
- 99 *Tavoyanum*, *Wallich.*
- 99 *zamiaefolium*, *Presl*, (not of  
*Hooker*, *Willdenow*, *Poirot*,  
*Moore*, *Desvauz*, *Fee.*
- 99 *Tarachia falcata*, *Presl.*
- 99 *Hænkeana*, *Presl.*
- 99 *polyodon*, *Presl.*
- 99 *Trichomanes adiantoides*, *Linn.*
- 99 *Asplenium firmum*, *Fee*, (not of  
*Kunze*, *Mettenius*, or *Moore.*)
- 99 *falcatum*, *Roxburgh.*  
*Ceylon*, *India*, *Malacca*, *Java*,  
*Philippines*, *Amboyna*, *China*,

PAGE.	
	Feejee Islands, Oahu, Norfolk Island, New South Wales, etc.
101	rachirhizon, <i>Fee, J. Smith, Brackenridge.</i>
101	amabile, <i>Liebmann.</i>
101	unisoriale, <i>Raddi, Desvauz.</i>
105	attenuatum, <i>Mettenius.</i>
105	Tarachia attenuata, <i>Presl.</i>
107	Athyrium tenuifrons, <i>Moore.</i>
111	Asplenium Petrarchæ, <i>Poirot, Sprengel, Link, Mettenius, Heufl.</i>
111	pilosum, <i>Gussoni.</i>
111	Petrarchæ, var. lata, <i>Moore, (plate xxxviii B.)</i>
111	Polypodium Petrarchæ, <i>Guerin.</i>
113	Asplenium Aitoni, var. axillare, <i>Moore.</i>
115	Australe, <i>Presl, Hooker, Fee, Moore.</i>
115	Allantodea tenera, <i>Brown, Sprengel, Desvauz, Kunze.</i>
117	Asplenium umbrosum, <i>Metten.</i>
117	Aitoni, <i>Moore.</i>
117	Allantodia oligantha, <i>Desvauz.</i>
117	Aspidium oliganthum, <i>Desvauz.</i>
117	Asplenium umbrosum, var. axillare, <i>Moore, (pl. xxxix.)</i>
117	axillare, <i>Webb &amp; Berthelot.</i>
117	Aspidium caudatum, <i>Swartz, Willdenow, Desvauz.</i>
117	obligodontum, <i>Desvauz.</i>
117	Athyrium azoricum, <i>Fee.</i>
117	Nephrodium oligodontum, <i>Desv.</i>
117	Tectaria caudata, <i>Cavanilles.</i>
119	Asplenium nitens, <i>Swartz, Hooker, Bojer, Moore, Poirot, Mettenius.</i>
119	macrophyllum, <i>Moore, (not of Swartz.)</i>
119	macrocarpum, <i>Telfair.</i>
121	Asplenium formosum, <i>Moore.</i>
	Sir W. J. Hooker has grouped together a large number of Ferns under the head of <i>Asplenium erectum</i> of

PAGE.	
	<i>Bory</i> , of which the <i>A. dentex</i> of this work is one; his synonyms are, therefore,—
121	erectum, <i>Bory, Mettenius, Schlechtendal, Moore, Pappe and Rawson, Hooker.</i>
121	mutilatum, <i>Kaulfuss.</i>
121	inæquilaterale, <i>Willdenow.</i>
121	falcatum, <i>Thunberg, (not of Lamarck.)</i>
121	lunulatum, <i>Kunze, Pappe &amp; Rawson, Mettenius.</i>
121	Dolabella, <i>Kunze, Fee.</i>
121	sphenolobium, <i>Kunze.</i>
121	insulare, <i>Carmichael.</i>
121	dentex, <i>Lowe.</i>
121	marinum, <i>Thouars.</i>
121	brachyotus, <i>Kunze, Pappe &amp; Rawson, Mettenius, Moore.</i>
121	auricularium, <i>Desvauz.</i>
121	consanguineum, <i>Gaudichaud.</i>
121	Brasiliense, <i>Raddi, Kunze, Moore.</i>
121	pulchrum, <i>Wallich.</i>
121	tenerum, <i>Ruddi.</i>
121	regulare, <i>Swartz, Presl.</i>
121	triste, <i>Kaulfuss, Kunze, Mettenius.</i>
121	erectum, var. proliferum, <i>Hooker.</i>
121	radicans, <i>Pritchard.</i>
121	pavonicum, <i>Brackenridge, Mettenius.</i>
121	reclinatum, <i>Houlston and Moore, J. Smith, Lowe.</i>
121	stoloniferum, <i>Bory, Swartz, Willdenow.</i>
121	alatum, <i>Richard.</i>
121	Fernandesianum, <i>Kunze, Mettenius, Gray, Moore, Colla, Hooker.</i>
121	erectum, var. harpeodes, <i>Hooker.</i>
121	harpeodes, <i>Kunze, Liebmann, Moore, Fee.</i>
121	falcatum, <i>Martens and Galleotti.</i>

PAGE.		PAGE.	
121	<i>A. erectum</i> , var. <i>subbipinnatum</i> , <i>Hooker</i> .	123	<i>A. odontophyllum</i> , <i>Wallich</i> .
121	var. <i>pinnatipartitum</i> , <i>Mettenius</i> .	123	<i>subalatum</i> , <i>Hooker &amp; Arnott</i> .
121	<i>pulchrum</i> , <i>Thouars, Kunze</i> .	125	<i>caudatum</i> , <i>Hooker, Swartz,</i> <i>Willdenow, Blume, Moore,</i> <i>Mettenius, Poiret</i> , (not of <i>Cavanilles</i> .)
121	<i>cuneatum</i> , <i>Kunze</i> .	125	<i>truncatilobum</i> , <i>Fee</i> .
121	<i>reclinatum</i> , var. <i>lobatum</i> , <i>Moore</i> .	125	<i>cyathæfolium</i> , <i>Bory</i> .
121	<i>lobatum</i> , <i>Pappe &amp; Rawson</i> .	125	<i>Diplazium cyathæfolium</i> , <i>Presl</i> , <i>Cuming</i> .
121	<i>gracile</i> , <i>Pappe &amp; Rawson</i> .	125	<i>Asplenium multisectum</i> , <i>Blume</i> .
121	<i>Pappei</i> , (P) <i>Moore</i> .	125	<i>horridum</i> , (not of <i>Kaulfuss</i> .)
123	<i>formosum</i> , <i>Poiret, Sprengel,</i> <i>Desvaux, Moore, Klotzsch</i> .	125	<i>aureum</i> , <i>Blume</i> , (not of <i>Cavanilles</i> .)
123	<i>incisum</i> , <i>R. Brown</i> , (not of <i>Thunberg, Swartz, Desvaux,</i> <i>Willdenow, Poiret, Kunze,</i> <i>Opiz, or J. Smith</i> .	125	<i>Tarachia caudata</i> , <i>Presl</i> .
		125	<i>truncatiloba</i> , <i>Presl</i> .
		127	<i>Athyrium decurtatum</i> , <i>Moore</i> .

## VOL. VI.

(See also pages 25 to 30, vol. vii.)

PAGE.		PAGE.	
31	<i>Polystichum vestitum</i> , var., <i>Moore</i> .	99	<i>Polystichum flexum</i> , <i>Moore</i> .
39	<i>vestitum</i> , var., <i>Moore</i> .	105	<i>Lastrea aristata</i> , <i>Moore</i> .
73	<i>Aspidium pubescens</i> , (not of <i>Swartz</i> .)	105	<i>Aspidium conifolium</i> , (not of <i>Presl</i> .)
73	<i>Lastrea quinquangularis</i> , <i>Moore</i> .	107	<i>Polystichum coriaceum</i> , <i>Moore</i> .
85	<i>Aspidium trifoliatum</i> , <i>Sprengel,</i> <i>Klotzsch</i> . (See p. 28, vol. vii.)	111	<i>Aspidium Canariense</i> , <i>Kunze</i> .
85	<i>Polypodium cordifolium</i> , <i>Lieb</i> .	111	<i>Lastrea Canariensis</i> , <i>Moore</i> .
87	<i>Nephrodium molle</i> , (not of <i>Link</i> .)	113	<i>frondosa</i> , <i>Moore</i> .
89	<i>Lastrea noveboracensis</i> , <i>Moore</i> .	115	<i>Nephrodium terminans</i> , <i>Moore</i> .
91	<i>Polystichum triangulum</i> , <i>Moore</i> .	117	<i>Sagenia cicutaria</i> , <i>Moore</i> .
		119	<i>macrophylla</i> , <i>Moore</i> .
		121	<i>Nephrodium unitum</i> , <i>Moore</i> .
		123	<i>Nephrodium Hookeri</i> , <i>Moore</i> .

## VOL. VII.

(See also page 30, vol. vii.)

PAGE.		PAGE.	
7	<i>Lastrea Kaulfussii</i> , <i>Moore</i> .	41	<i>Oleandra neriiformis</i> , <i>Moore</i> .
11	<i>æmula</i> , <i>Moore</i> .	59	<i>Nephrolepis tuberosa</i> , <i>Moore</i> .
13	<i>hispida</i> , <i>Moore</i> .	55	<i>platyotis</i> , <i>Moore</i> .
15	<i>Nephrodium glandulosum</i> , <i>Moore</i> .	87	<i>Cystopteris tenuis</i> , <i>Desvaux</i> .
17	<i>Lastrea crinita</i> , <i>Moore</i> .	91	<i>Hemionitis palmata</i> , <i>Moore</i> .
37	<i>Mesochlæna Javanica</i> , <i>Moore</i> .	93	<i>cordifolia</i> , <i>Moore</i> .

THE derivations of the following not having appeared at the proper places are inserted here.

Vol. I., page 83	Dryopteris—Oak Fern.
Vol. II., " 67	Musæfolium—Musa (Banana) leaved.
" " 69	Morbillosum—Somewhat sickly-looking.
Vol. III., " 13	Macrophyllum—Large-leaved.
" " 53	Cultratum—For sharp, read shaped like a
" " 129	Crenata—Notched. [plough coulter.
Vol. IV., " 3	Felosma—For Heavy-swelling, read Strong-
" " 19	Scaberula—Somewhat rough. [smelling.
" " 39	Micromera—Small divisions.
" " 115	Meyeriana—Named after Meyer.
" " 135	Punctulata—Dotted.
Vol. V., " 69	Marinum—Sea.
" " 101	Rachirhizon—Rachis-rooted.
" " 107	Strigillosum—From a strigil, or curry-comb.
" " 159	Krebsii—Named after Krebs.
Vol. VI., " 19	Truncatula—Slightly truncate.
" " 35	Augescens—Increasing.
" " 57	Acrostichoides—Acrostichum-like.
" " 89	Thelypteroides—Thelypteris-like.
Vol. VII., 41-43	Oleandra—Oleander-like.
" " 145	Melanopus—Black-footed.
" " 151	Osmundacea—Osmunda-like.

## CONCLUSION.

It is necessary to say a few words to the subscribers in concluding a work extending over a number of volumes, as, in course of progress, plans become somewhat changed, and alterations take place that were not thought of at the commencement of the work. It was intended to publish a large Glossary at the conclusion, but the Addenda to the different volumes has extended the work beyond the prescribed limits, and it was thought desirable that the Glossary should give place to the Addenda.

In conclusion, I must offer my most hearty thanks to those gentlemen who have so kindly afforded me assistance in the present undertaking, both by supplying me with plants and fronds, and also with works and information on the subject, and in doing so I must more especially mention the great obligations I am under to Sir W. J. Hooker; Mr. Thomas Moore, of the Botanic Gardens, Chelsea; Mr. Joseph Henderson, of Wentworth; Mr. J. Smith, the Curator of the Royal Gardens, Kew; Mr. Moore, of the Glasnevin Gardens; Professor Balfour, of Edinburgh; Mr. Norman, of Hull; Mr. Clarke, of the Glasgow Gardens; Mr. Veitch, Jun., of Chelsea; Mr. Sim, of Foot's Cray; Mr. Rollisson, of Tooting; and Mr. E. Cooling, of Derby. There are many more to whom my thanks ought to be given, and, although not mentioning them personally, to each and all who have rendered me assistance I beg to return my grateful thanks.

The difficulty in determining imperfectly-known species, (especially where the author has not the advantage of reference to the specimens of the different authorities,) is very great; botanists must therefore welcome as a great boon the valuable works now publishing on the subject, namely, "The Species Filicum" of Sir W. J. Hooker, and the "Index Filicum" of Mr. Thomas Moore. These works, as far as they have already

progressed, have been almost universally adopted, and for this reason the Addenda has become larger than it otherwise would have been.

Since the commencement of the work a variety of New Ferns have been introduced into cultivation in this country, and these are now being described and figured monthly in an addenda to the present work, entitled "A Natural History of New and Rare Ferns," of which three numbers have already appeared.

The author's endeavour, in publishing a work on Ferns, has been to describe as faithfully as he was able, the different Ferns cultivated in the gardens, greenhouses, and stoves, of Great Britain, and to give this information with coloured illustrations in a very cheap form, (considering the expense of the plates) to the public, leaving the deep study of the subject to the valuable works, already quoted, of Sir W. J. Hooker and Mr. Moore.

# AUTHORITIES QUOTED 'IN VOL. VIII.

- |                   |                       |                   |
|-------------------|-----------------------|-------------------|
| Agardh.           | Don.                  | Hoffmann.         |
| Andrews, W.       | Dodonæus.             | Hombron.          |
| Arnott.           | Drege.                | Hooker, Sir W. J. |
| Arrabida.         | Du Petit-Thouars.     | Hooker, Dr. J. D. |
| Babington.        | Duperrey.             | Houlston.         |
| Balbis.           | Ehrhart.              | Houttuyn.         |
| Banks.            | Ecklon.               | Hochstetter, Dr.  |
| Bancroft, Dr.     | Edgerley, J.          | Hostmann, Dr.     |
| Bauer.            | Endlicher.            | Hudson.           |
| Bernhardi.        | Fee.                  | Hull.             |
| Bellbank.         | Finlay.               | Humboldt.         |
| Beechey, Captain. | Fischer.              | Imray, Dr.        |
| Berthelot.        | Forster.              | Jacquin.          |
| Bojer.            | Forskal.              | Jacquemont.       |
| Bolle.            | Fries.                | Kaulfuss.         |
| Braun.            | Forbes.               | Klotzsch.         |
| Blume.            | Galleotti.            | Koch.             |
| Bolton.           | Gardner.              | Karsten.          |
| Bongard.          | Gaspar.               | Kitaibel.         |
| Bonpland.         | Gaudichaud.           | Kunze.            |
| Bory.             | Gay.                  | Kunth.            |
| Brown, R.         | Galpine.              | La Billardiere.   |
| Brackenridge.     | Gleichen, Baron P. F. | Lamarck.          |
| Buchanan.         | Gilibert.             | Langsdorff.       |
| Cavanilles.       | Gillies.              | Lapeyrouse.       |
| Carmichael.       | Gœpp.                 | Lasch.            |
| Calwell.          | Gmelin.               | L'Heritier.       |
| Caley.            | Greville.             | Liebmänn.         |
| Cameron, D.       | Guthrie.              | Lindley.          |
| Cordus.           | Goldm.                | Link.             |
| Colenso.          | Gray, Dr. A.          | Linnæus.          |
| Colla.            | Griffith.             | Lemann.           |
| Chamisso.         | Guerin.               | Ledebour.         |
| Cunningham, A.    | Gueinzins.            | Linden.           |
| Cuming.           | Guillemin.            | Lumnitz.          |
| Deakin.           | Gunn, R.              | Loddiges.         |
| Dalechamps.       | Gussoni.              | Lowe, E. J.       |
| Davall.           | Hamilton.             | Lowe, H.          |
| Decaisne.         | Hall, Col.            | Lobb.             |
| Descourt.         | Hartmann.             | Macreight.        |
| Desvaux.          | Henderson, Joseph.    | Martens.          |
| De Vriese.        | Heward.               | Martius.          |
| Dickson, J.       | Hedwig.               | Mackay.           |
| Dieffenbach.      | Henfrey, A.           | Macrae.           |
| Douglas.          | Heyne.                | Masson.           |

Mettenius.  
 Mertens, Dr.  
 Michaux.  
 Miquel.  
 Mirbel.  
 Mönch.  
 Mohr.  
 Moore, T.  
 Moore, D.  
 Morison.  
 Moritz.  
 Muller.  
 Muelle.  
 Newman.  
 Nees.  
 Nuttall.  
 Nyman.  
 Oeder.  
 Opiz.  
 Palisot.  
 Pappe.  
 Parker.  
 Paxton, Sir J.  
 Pernetty.  
 Philippi.  
 Pritchard.  
 Perony.  
 Petiver.  
 Plukenet.  
 Plumier.  
 Poeppig.  
 Pohl.  
 Poiret.  
 Presl.  
 Pursh.  
 Pratt, Miss.

Purdie.  
 Raddi.  
 Ralfs.  
 Rawson.  
 Remy.  
 Reinwardt.  
 Retzius.  
 Reeves, J.  
 Roehling.  
 Roth.  
 Roxburgh.  
 Richard.  
 Roemer.  
 Rothery, H. C.  
 Rollisson.  
 Rudge.  
 Rumphius.  
 Ruprecht.  
 Sadler.  
 Salisbury.  
 Saltzmann.  
 Schiede.  
 Schkuhr.  
 Schlechtendal.  
 Schott.  
 Schrader.  
 Scouler.  
 Schnizl.  
 Schultz.  
 Seuber.  
 Sim.  
 Sinclair.  
 Sloane.  
 Smith, J. E.  
 Smith, J.  
 Solander.

Sowerby.  
 Splitgerber.  
 Sprengel.  
 Sturm.  
 Sueber.  
 Swartz.  
 Sweet.  
 Tausch.  
 Taschner.  
 Telfair.  
 Tines.  
 Turcz.  
 Thunberg.  
 Tode, H. J.  
 Vahl.  
 Vautier.  
 Ventenat.  
 Veitch, J., Jun.  
 Velloz.  
 Villars.  
 Wahlenberg.  
 Wallich.  
 Wallroth.  
 Watson, H. C.  
 Webb.  
 Wight.  
 Willdenow.  
 Wilson.  
 Withering.  
 Wulfen.  
 Young, Dr. Forbes.  
 Zeyher.  
 Zenker.  
 Zippel.  
 Zollinger.



## CONTRIBUTORS TO VOL. VIII.

- |   |   |
|---|---|
| Mr. W. Andrews, Dublin.                             | Mr. Large, New York.  |
| Professor Balfour, Edinburgh.                       | Mr. Lamb, Osmaston Manor, near Ashbourne.                       |
| Messrs. Booth and Sons, Hamburg.                    | Mr. Masters, Exotic Nursery, Canterbury.                        |
| Miss Carr, Qualt Rectory, Bridgenorth.              | Mr. Thomas Moore, F.L.S., Exotic Gardens, Chelsea.              |
| Mr. Clarke, Royal Botanic Gardens, Glasgow.         | Mr. D. Moore, Glasnevin Gardens, Dublin.                        |
| Mr. Clarke, Flass House, Crosby-Ravensworth.        | Sir Oswald Mosley, Bart., Rolleston Hall, near Burton-on-Trent. |
| Mr. Edwin Cooling, Mile-ash Nursery, Derby.         | Mr. R. T. Millett, Penzance.                                    |
| Mrs. Delves, Tunbridge Wells.                       | Mr. G. Norman, Hull.  |
| Mr. R. J. Gray, St. Thomas', Exeter.                | Mr. Parker, Nursery, Holloway.                                  |
| Mr. Downes, Ilfracombe.                             | Messrs. Rollisson, Exotic Nursery, Tooting, London.             |
| Mr. Joseph Henderson, Wentworth House.              | M. Schott, Imperial Gardens, Schonbrunn, Vienna.                |
| Dr. J. D. Hooker, R.N., F.E.S., Royal Gardens, Kew. | Mr. J. Sidebotham, Manchester.                                  |
| Sir W. J. Hooker, F.R.S., Royal Gardens, Kew.       | Mr. R. Sim, Foot's Cray, Kent.                                  |
| Mr. E. G. Henderson, Wellington Nursery, London.    | Mr. J. Smith, Royal Gardens, Kew.                               |
| Mr. Ingram, Royal Gardens, Windsor.                 | Mr. Stewart, late gardener, Sudbury.                            |
| Mr. Ingram, Belvoir Castle.                         | Mr. Stratton, Botanic Gardens, Cambridge.                       |
| Messrs. Jackson, Nursery, Kingston-on-Thames.       | Messrs. Stansfield, Vale Nursery, Todmorden.                    |
| Mr. James, Vauvert.                                 | Mr. Veitch, Jun., Exotic Nursery, Chelsea.                      |
| Mr. Kennedy, Bedford Conservatory, Covent Garden.   | Mr. R. Wilkinson, Totteridge Park, Hertfordshire.               |

# INDEX TO VOL. VIII.

[Those Ferns having *an authority* attached, are the respective names adopted in this Work, of which a description, together with a coloured illustration, and one or more woodcuts are given. a 1, a 2, a 3, a 4, a 5, a 6, and a 7, refer to the appendix of each volume, placed at the end of the present volume.]

	PAGE.		PAGE.
Acrophorus chærophyllus . .	53	Adiantum caudatum . .	a 3
hispidus . . . .	59	var. ciliatum . .	a 3
immersus . . . .	57	ciliatum . . . .	a 3
pulcher . . . .	53	curvatum . . . .	a 3
Acrostichum barbarum . .	187	cycloides . . . .	a 3
filare . . . .	a 5	cultratum . . . .	a 3
var. latum . . . .	a 5	cristatum . . . .	a 3
var. validum . . . .	a 5	capillus-veneris . .	a 3
laciniatum . . . .	a 5	var. dissectum . .	a 3
lingua . . . .	a 1	var. emarginatum .	a 3
platyneuron . . . .	a 5	var. latissimum . .	a 3
polypodioides . . . .	a 4	var. Moritzianum .	a 3
ruta-muraria . . . .	a 5	dissectum . . . .	a 3
Adeptum pilosiusculum . .	123	denticulatum . . . .	71
Adiantum affine . . . .	a 3, a 3	dolabriforme . . . .	a 3
assimile . . . .	a 3	exile . . . .	a 3
Æthiopicum . . . .	a 3	emarginatum . . . .	a 3
arcuatum . . . .	a 3	flabellulatum . . . .	a 3
aculeatum . . . .	79	formosum . . . .	a 3
asarifolium . . . .	a 3	falcatum . . . .	a 3
asperum . . . .	a 3	frutescens . . . .	79
anomalum . . . .	a 3	glabrum . . . .	a 3
aleuticum . . . .	a 3	hispidulum . . . .	a 3
Americanum . . . .	a 3	var. glabrum . . .	a 3
acuminatum . . . .	a 3	var. tenellum . . .	a 3
Busbyanum . . . .	a 3	hirsutum . . . .	a 3
Berterianum . . . .	a 3	intermedium . . . .	a 3
cuneatum . . . .	a 3, 55	Juglandifolium . . .	a 3
concinnum . . . .	a 3	Kunzeanum . . . .	a 3

	PAGE.		PAGE.
<i>Adiantum lanceolatum</i> . . .	a 3	<i>Adiantum tenellum</i> . . .	a 3, a 3
<i>latissimum</i> . . .	a 3	<i>ternatum</i> . . .	a 3
<i>lucidum</i> . . .	a 3, a 3	<i>villosum</i> . . .	a 3
<i>var. anomalum</i> . . .	a 3	<i>vestitum</i> . . .	a 3
<i>var. majus</i> . . .	a 3	<i>Allantodea oligantha</i> . . .	a 5
<i>longissimum</i> . . .	a 3	<i>tenera</i> . . .	a 5
<i>lunulatum</i> . . .	a 3	<i>Alsophila armigera</i> . . .	171, 172
<i>macrophyllum</i> . . .	a 3	<i>aspera</i> . . .	171, 172
<i>microphyllum</i> . . .	a 3	<i>armata</i> . . .	171, 172, 181
<i>minor</i> . . .	77	<i>atrovirens</i> . . .	171, 172
<i>Moritzianum</i> . . .	a 3	<i>Australis. Broen</i> . . .	171, 172,
<i>nervosum</i> . . .	a 3, a 3	. . .	173, 177
<i>orientale</i> . . .	a 3	<i>aculeata</i> . . .	172, 181
<i>oblongatum</i> . . .	a 3	<i>arbuscula</i> . . .	172
<i>obliquum</i> . . .	a 3	<i>adspersa</i> . . .	172
<i>pulverulentum</i> . . .	a 3	<i>aurea</i> . . .	172
<i>pedatum</i> . . .	a 3	<i>axillaris</i> . . .	172
<i>var. aleuticum</i> . . .	a 3	<i>alternans</i> . . .	173
<i>plicatum</i> . . .	a 3	<i>affinis</i> . . .	183
<i>platyphyllum</i> . . .	a 3	<i>Blanchetiana</i> . . .	172
<i>pubescens</i> . . .	a 3, a 3	<i>brevia</i> . . .	172
<i>pentadactylon</i> . . .	a 3	<i>brunoniana</i> . . .	172
<i>Plumieri</i> . . .	a 3	<i>Beyrichiana</i> . . .	173
<i>proliferum</i> . . .	a 3	<i>blechnoides</i> . . .	171, 174
<i>pendulinum</i> . . .	a 3	<i>Capensis. J. Smith</i> . . .	171,
<i>peltatum</i> . . .	a 3	. . .	173, 175
<i>pellucidum</i> . . .	a 3	<i>var. polyantha</i> . . .	171
<i>pteropes</i> . . .	a 3	<i>compta</i> . . .	176
<i>rigidum</i> . . .	a 3	<i>contaminans</i> . . .	172
<i>Raddianum</i> . . .	a 3	<i>caudata</i> . . .	172
<i>rotundifolium</i> . . .	a 3	<i>comosa</i> . . .	172
<i>repens</i> . . .	77	<i>crinita</i> . . .	172
<i>var. minor</i> . . .	77	<i>Colensoi</i> . . .	172
<i>reniforme</i> . . .	a 3	<i>cordata</i> . . .	172
<i>var. asarifolium</i> . . .	a 3	<i>crenata</i> . . .	172
<i>striatum</i> . . .	a 3	<i>Cumingii</i> . . .	173
<i>scabrum</i> . . .	a 3, a 3	<i>cinerca</i> . . .	183
<i>setulosum</i> . . .	a 3	<i>Deckeriana</i> . . .	183
<i>tenerum</i> . . .	a 3, a 3, a 3	<i>decurrens</i> . . .	171, 172
<i>trigonum</i> . . .	a 3	<i>Dombeyi</i> . . .	172
<i>thalictroides</i> . . .	a 3	<i>elegans</i> . . .	171, 173
<i>trisinuatum</i> . . .	a 3	<i>elongata</i> . . .	171, 173
<i>trapeziforme</i> . . .	a 3, a 3	<i>excelsa</i> . . .	171, 173
<i>var. oblongatum</i> . . .	a 3	<i>echinata</i> . . .	172
<i>var. pentadactylon</i> . . .	a 3	<i>erubescens</i> . . .	173
<i>var. Plumieri</i> . . .	a 3	<i>extensa</i> . . .	159
<i>trapezoides</i> . . .	a 3	<i>ferox. Presl</i> . . .	171, 181

	PAGE.
<i>Alsophila Finlaysoniana</i> . . .	173
Gardneri . . .	171, 173
glabra . . .	171, 173
gigantea . . .	172
glaucescens . . .	172, 173
Grevilleana . . .	172
glauca . . .	173
Hostmanni 154, 169, 172, 173	
Hænkei . . .	172, 173
hirta . . .	173
Hookeriana . . .	171, 173
Humboldtii . . .	173
hirsuta . . .	171
infesta . . .	171, 173
Javanica . . .	174
Junghuhniana . . .	173
Kegelii . . .	174
lævis . . .	172, 174
lingulata . . .	174
Leprieuriana . . .	169
læta . . .	173
lanuginosa . . .	173
latebrosa . . .	171, 173
lepifera . . .	172, 173
Lexhenaultiana . . .	173
leucolepis . . .	171, 173
Loddigesii . . .	173
lunulata . . .	171, 173
lurida . . .	172, 173
Miersii . . .	171, 173
monticola . . .	171
Mexicana . . .	171, 173
millefolium . . .	172, 173
Martinicensis . . .	172
Manillensis . . .	172
marginalis . . .	173
melanopus . . .	173
Mertensiana . . .	173
microdonta . . .	173
microphylla . . .	173
Miquelii . . .	173
mollissima . . .	173
myosuroides . . .	173
macrocarpa . . .	174
Manilensis . . .	174
multiflora . . .	174
nigricans . . .	174

	PAGE.
<i>Alsophila nigra</i> . . .	171, 173
oblonga . . .	173
obtusa . . .	173
oligocarpa . . .	173
oligosora . . .	173
polyantha . . .	176
pruinata. <i>Kaulfuss</i> 171, 173,	183
paleolata . . .	171, 173
pauciflora . . .	173
Peruviana . . .	173
Phalerata . . .	171, 173
plagiopteris . . .	171, 173
platyphylla . . .	173
podophylla . . .	173
Poeppigii . . .	171, 173
polycampta . . .	173
procera . . .	171, 173
pungens . . .	173
pyncocarpa . . .	171, 173
Parkeri . . .	174
pilosa . . .	171
rigidula . . .	171
radens. <i>Kaulfuss</i> 171, 172,	173, 179
Raddiana . . .	181
Sellowiana . . .	181
Samoenis . . .	173
Schaffneriana . . .	173
Schiedeana . . .	172, 173
senilis . . .	173
setosa . . .	171, 173
speciosa . . .	172, 173
Sprengeliana . . .	171, 173
squamulata . . .	172, 173
subaculeata . . .	171, 173
strigosa . . .	172, 174
serrata . . .	172
tænitis . . .	171, 173
tomentosa . . .	172, 173
Tumacensis . . .	172
tenera . . .	172
tenuisecta . . .	173
tristis . . .	173
truncata . . .	173
Tahitensis . . .	174
urolepis . . .	174

	PAGE.		PAGE.
<i>Alsophila vestita</i> . . .	173	<i>Angiopteris acrocarpa</i> . . .	211
<i>villosa</i> . . .	171, 173	<i>Amboinensis</i> . . .	211
<i>Weigeltii</i> . . .	172, 173	<i>angustifolia</i> . . .	211
<i>Walkerae</i> . . .	174	<i>angustata</i> . . .	211
<i>Amphidesmium blechnoides</i> .	174	<i>Ankolana</i> . . .	211
<i>Amphicosmia alternans</i> . .	173	<i>Aphanosorus</i> . . .	211
<i>Australis</i> . . .	173	<i>approximata</i> . . .	211
<i>Beyrichiana</i> . . .	173	<i>Arnottiana</i> . . .	211
<i>Capensis</i> . . .	173, 175	<i>Assanica</i> . . .	211
<i>Cumingii</i> . . .	173	<i>attenuata</i> . . .	211
<i>Hostmanni</i> . . .	169, 173	<i>aurata</i> . . .	211
<i>Javanica</i> . . .	174	<i>Beecheyana</i> . . .	211
<i>Kegelii</i> . . .	174	<i>Brongniartiana</i> . . .	211
<i>laevis</i> . . .	174	<i>camptophlebia</i> . . .	211
<i>lingulata</i> . . .	174	<i>caudata</i> . . .	211
<i>macrocarpa</i> . . .	174	<i>Cochinchinensis</i> . . .	211
<i>Manilensis</i> . . .	174	<i>commutata</i> . . .	211
<i>multiflora</i> . . .	174	<i>crassifolia</i> . . .	211
<i>nigricans</i> . . .	174	<i>crassipes</i> . . .	211, 212
<i>Parkeri</i> . . .	174	<i>cupreata</i> . . .	211
<i>riparia</i> . . .	175	<i>cuspidata</i> . . .	211
<i>strigosa</i> . . .	174	<i>distans</i> . . .	212
<i>Tahitensis</i> . . .	174	<i>Dregeana</i> . . .	212
<i>urolepis</i> . . .	174	<i>D'Urvilleana</i> . . .	212
<i>Walkerae</i> . . .	174	<i>evecta. Hoffmann</i> . . .	212, 213
<i>Anemia cordifolia</i> . . .	201	<i>Gaudichaudiana</i> . . .	212
<i>fraxinifolia</i> . . .	201	<i>Griffithiana</i> . . .	212
<i>Hænkei</i> . . .	201	<i>Hartingiana</i> . . .	212
<i>hirta</i> . . .	201	<i>Helferiana</i> . . .	212
<i>laciniata</i> . . .	201	<i>Hookeriana</i> . . .	212
<i>lanceolata</i> . . .	201	<i>Hugeliana</i> . . .	212
<i>longifolia</i> . . .	201	<i>Hypoleuca</i> . . .	212
<i>phyllitidis</i> . . .	201	<i>Indica</i> . . .	212
<i>repanda</i> . . .	201	<i>laciniata</i> . . .	212
<i>sorbifolia</i> . . .	201	<i>lasegueana</i> . . .	212
<i>Anemidietyon fraxinifolium</i> .	201, 202	<i>latifolia</i> . . .	212
<i>cordifolium</i> . . .	202	<i>Leschenaultiana</i> . . .	212
<i>laciniatum</i> . . .	201, 202	<i>longifolia</i> . . .	212
<i>longifolium</i> . . .	202	<i>macrocephala</i> . . .	212
<i>hirtum</i> . . .	199	<i>macrophylla</i> . . .	212
<i>phyllitidis. J Smith</i> . . .	199,	<i>Madagascariensis</i> . . .	212
201, 202		<i>magnifica</i> . . .	212
<i>var. cordifolium</i> . . .	202	<i>marginata</i> . . .	212
<i>var. laciniatum</i> . . .	202	<i>microsporangia</i> . . .	212
<i>var. longifolium</i> . . .	202	<i>Miqueliana</i> . . .	212
<i>var. fraxinifolium</i> . . .	202	<i>muricata</i> . . .	212
<i>Tweedianum</i> . . .	199	<i>pallescens</i> . . .	212

	PAGE.
<i>Angiopteris plagiocarpa</i> . . .	212
<i>polysporangia</i> . . .	212
<i>Presliana</i> . . .	212
<i>pruinosa</i> . . .	212
<i>punctata</i> . . .	212
<i>repandula</i> . . .	212
<i>salicifolia</i> . . .	212
<i>similis</i> . . .	212
<i>suboppositifolia</i> . . .	212
<i>Sylhetensis</i> . . .	212
<i>Teysmanniana. De Vriese</i>	212, 215
<i>uncinata</i> . . .	212
<i>Wallichiana</i> . . .	212
<i>Wightiana</i> . . .	212
<i>Willinkii</i> . . .	212
<i>Aphyllocalpa regalis</i> . . .	7
<i>Aspidium Barometz</i> . . .	103
<i>Canariense</i> . . .	a 6
<i>Capense</i> . . .	175
<i>caudatum</i> . . .	a 5
<i>coniifolium</i> . . .	a 6
<i>Halleri</i> . . .	a 5
<i>hymenophylloides</i> . . .	53
<i>oliganthum</i> . . .	a 5
<i>oligodontum</i> . . .	a 5
<i>pubescens</i> . . .	a 6
<i>punctilobum</i> . . .	123
<i>trifoliatum</i> . . .	a 6
<i>Anapeltis squamulosa</i> . . .	a 1
<i>vaccinifolia</i> . . .	a 1
<i>Asplenium adiantum-nigrum</i> a 5	
<i>Aitoni</i> . . .	a 5
<i>aureum</i> . . .	a 5
<i>axillare</i> . . .	a 5
<i>appendiculatum, var.</i> a 5	
<i>angustilobum</i> . . .	a 5
<i>adiantoides</i> . . .	a 5
<i>amabile</i> . . .	a 5, a 5
<i>alloopterum</i> . . .	a 5
<i>angustifolium</i> . . .	a 5
<i>Australe</i> . . .	a 5
<i>auricularium</i> a 5, a 5	
<i>appendiculatum</i> . . .	a 5
<i>abscissum</i> . . .	a 5
<i>alatum</i> . . .	a 5
<i>Aitoni, var. axillare</i> a 5	

	PAGE.
<i>Asplenium attenuatum</i> . . .	a 5
<i>alternifolium</i> . . .	a 5
<i>apicidentatum</i> . . .	a 5
<i>blechnoides</i> . . .	a 4
<i>blandulum</i> . . .	a 5
<i>bifurcatum</i> . . .	a 5
<i>Breynii</i> . . .	a 5
<i>brachypterum</i> . . .	a 5
<i>brachyotus</i> . . .	a 5
<i>Brasilense</i> a 5, a 5	
<i>bidentatum</i> . . .	a 5
<i>bulbiferum</i> . . .	a 5
<i>var. laxum</i> . . .	a 5
<i>var. appendiculatum</i> a 5	
<i>Collinum</i> . . .	a 5
<i>Canariense</i> . . .	a 5
<i>cicutarium</i> . . .	a 5, a 5
<i>cuspidatum</i> . . .	a 5
<i>cuneatum</i> . . .	a 5
<i>cyrtopterum</i> a 5, a 5	
<i>crenulatum</i> . . .	a 5
<i>confusum</i> . . .	a 5
<i>cristatum</i> . . .	a 5
<i>cultratum</i> . . .	a 5
<i>cultrifolium</i> . . .	a 5
<i>caudatum</i> . . .	a 5, a 5
<i>cyathæfolium</i> . . .	a 5
<i>caryotoides</i> . . .	a 5
<i>consanguineum</i> . . .	a 5
<i>compressum</i> . . .	a 5
<i>cirrhatum</i> . . .	a 5
<i>chondrophyllum</i> . . .	a 5
<i>consimile</i> . . .	a 5
<i>dentex</i> a 5, a 5, a 5, a 5	
<i>decurrens</i> . . .	a 5
<i>difforme</i> . . .	a 5
<i>dimorphum</i> . . .	a 5
<i>Dolabella</i> . . .	a 5
<i>drepanophyllum</i> . . .	a 5
<i>dimidiatum</i> . . .	a 5, a 5
<i>dissectum</i> . . .	a 5
<i>discolor</i> . . .	a 5
<i>distans</i> . . .	a 5
<i>dichroum</i> . . .	a 5
<i>erectum, var.</i> . . .	a 5
<i>elachnophyllum</i> . . .	a 5
<i>elegans</i> . . .	a 5

	PAGE.		PAGE.
<i>Asplenium elatum</i> . . .	a 5	<i>Asplenium lobatum</i> . . .	a 5
<i>erosum</i> . . .	a 5	<i>lucidum</i> , var. <i>Lyalli</i>	a 5
<i>erectum</i> . . .	a 5	var. <i>paucifolium</i>	a 5
var. <i>proliferum</i> . . .	a 5	var. <i>obliquum</i>	a 5
var. <i>harpeodes</i>	a 5	<i>lætum</i> . . .	a 5
var. <i>subbipinnatum</i>	a 5	<i>lunulatum</i> . . .	a 5
var. <i>pinnatipartitum</i>	a 5	<i>laxum</i> . . .	a 5
<i>ebeneum</i> . . .	a 5	<i>lanceolatum</i> . . .	a 5
<i>flabellifolium</i> . . .	a 5	var. <i>elegans</i>	a 5
<i>furcatum</i> a 5, a 5, a 5		var. <i>microdon</i>	a 5
<i>fasciculaceum</i> . . .	a 5	var. <i>obovatum</i> . . .	a 5
<i>formosum</i> . . .	a 5, a 5	<i>luridum</i> . . .	a 5
<i>flabellulatum</i> . . .	a 5	<i>monanthemum</i> . . .	a 5
<i>filiæ-fœmina</i> . . .	123	<i>Menziesii</i> . . .	a 5
<i>falcatum</i> . . .	a 5, a 5, a 5	<i>macrocarpum</i> . . .	a 5, a 5
<i>Fernandesianum</i> . . .	a 5	<i>melanocaulon</i> . . .	a 5
<i>Forsterianum</i> . . .	a 5	<i>Mexicanum</i> . . .	a 5
<i>firmum</i> . . .	a 5	<i>microdon</i> . . .	a 5
<i>flaccidum</i> . . .	a 5	<i>marinum</i> , var. <i>microdon</i>	
<i>fontanum</i> . . .	a 5	<i>maderene</i> . . .	a 5
<i>fragrans</i> . . .	a 5, a 5	<i>mascareinense</i> . . .	a 5
<i>Forsteri</i> . . .	a 5	<i>mysurense</i> . . .	a 5
<i>falsum</i> . . .	a 5	<i>Matthioli</i> . . .	a 5
<i>geminaria</i> . . .	a 5	<i>multicaule</i> . . .	a 5
<i>gracile</i> . . .	a 5	<i>marinum</i> . . .	a 5
<i>Germanicum</i> . . .	a 5	<i>macrophyllum</i> . . .	a 5
<i>Galleotti</i> . . .	a 5	<i>multisectum</i> . . .	a 5
<i>hemionitis</i> . . .	a 5, a 5	<i>murale</i> , var. . .	a 5
<i>harpeodes</i> . . .	a 5	<i>microphyllum</i> . . .	a 5
<i>horridum</i> . . .	a 5	<i>mastigophyllum</i> . . .	a 5
<i>heterophyllum</i> . . .	a 5	<i>mutilatum</i> . . .	a 5
<i>humile</i> . . .	a 5	<i>minimum</i> . . .	a 5
<i>hymenophylloides</i>	a 5	<i>novum</i> . . .	a 5
<i>Halleri</i> . . .	a 5	<i>nigricans</i> . . .	a 5
<i>hirsutum</i> . . .	a 5	<i>nitens</i> . . .	a 5
<i>Harovii</i> . . .	a 5	<i>Newmani</i> . . .	a 5
<i>intermedium</i> a 5, a 5, a 5		<i>obliquum</i> . . .	a 5
<i>incisum</i> . . .	a 5	<i>obtusatum</i> . . .	a 5
<i>integrum</i> . . .	a 5	var. <i>obliquum</i>	a 5
<i>insulare</i> . . .	a 5	var. <i>difforme</i> . . .	a 5
<i>inæquilaterale</i> . . .	a 5, a 5	<i>otites</i> . . .	a 5
<i>insigne</i> . . .	a 5	<i>obtusifolium</i> . . .	a 5
<i>Karstenianum</i> . . .	a 5	<i>odontites</i> . . .	a 5
<i>leptophyllum</i> . . .	a 5, a 5	<i>odontophyllum</i> . . .	a 5
<i>lucidum</i> . . .	a 5	<i>obovatum</i> . . .	a 5
<i>Lyalli</i> . . .	a 5	<i>obtusilobum</i> . . .	a 5
<i>lunulatum</i> , var. . .	a 5	<i>obtusissimum</i> . . .	a 5

	PAGE.
<i>Asplenium palmatum</i> . . .	a 5
<i>parvulum</i> . . .	a 5
<i>polyodon</i> . . .	a 5
<i>pulchellum</i> . . .	a 5, a 5
var. <i>otites</i> . . .	a 5
<i>pygmæum</i> . . .	a 5
<i>pulchrum</i> . . .	a 5, a 5, a 5
<i>planicaule</i> . . .	a 5
<i>pavonicum</i> . . .	a 5, a 5
<i>Pappei</i> . . .	a 5
<i>Petrarchæ</i> . . .	a 5
var. <i>lata</i> . . .	a 5
<i>præmorsum</i> . . .	a 5
var. <i>furcatum</i> . . .	a 5
<i>pilosum</i> . . .	a 5
<i>Pœppigii</i> . . .	a 5
<i>pumilum</i> . . .	a 5
<i>resiliens</i> . . .	a 5
<i>rhizophorum</i> . . .	a 5, a 5
<i>rachirhizon</i> , . . .	a 5, a 5
<i>ruta-muraria</i> . . .	a 5
var. <i>zoliense</i> . . .	a 5
<i>regulare</i> . . .	a 5, a 5
<i>radicans</i> . . .	a 5, a 5, a 5
<i>reclinatum</i> . . .	a 5
var. <i>lobatum</i> . . .	a 5
<i>Raddianum</i> . . .	a 5
<i>subulatum</i> . . .	a 5
<i>strictum</i> . . .	a 5
<i>Schimperianum</i> . . .	a 5
<i>serratum</i> . . .	a 5, a 5
var. <i>crenulatum</i> . . .	a 5
<i>Schomburgkianum</i> . . .	a 5
<i>scariosum</i> . . .	a 5
<i>Schkuhrianum</i> . . .	a 5
<i>sphenolobium</i> . . .	a 5
<i>stoloniferum</i> . . .	a 5
<i>septentrionale</i> . . .	a 5
<i>scleroprium</i> . . .	a 5
<i>sarmentosum</i> . . .	a 5
<i>saxosum</i> . . .	a 5
<i>sphenoides</i> . . .	a 5
<i>serra</i> . . .	a 5
var. <i>Woodwardioides</i>	
<i>subcaudatum</i> . . .	a 5
<i>tenellum</i> . . .	a 5
<i>tenerum</i> . . .	a 5, a 5

	PAGE.
<i>Asplenium triste</i> . . .	a 5, a 5
<i>truncatilobum</i> . . .	a 5
<i>tenerrimum</i> . . .	a 5
<i>Tavoyanum</i> . . .	a 5
<i>truncatum</i> . . .	a 5
<i>tripartitum</i> . . .	a 5
<i>trichomanoides</i> . . .	a 5
<i>trichomanes</i> . . .	a 5
<i>unilaterale</i> . . .	a 5
<i>viride</i> . . .	a 5
<i>unisoriale</i> . . .	a 5
<i>umbrosum</i> . . .	a 5
var. <i>axillare</i> . . .	a 5
<i>virens</i> . . .	a 5
<i>Veitchianum</i> . . .	a 5
<i>viviparum</i> . . .	a 5
<i>uniseriale</i> . . .	a 5
<i>Woodwardioides</i> . . .	a 5
<i>Woodwardioideum</i> . . .	a 5
<i>zamiasfolium</i> . . .	a 5, a 5
<i>zoliense</i> . . .	a 5
<i>Athyrium Azoricum</i> . . .	a 5
<i>decurtatum</i> . . .	a 5
<i>fontanum</i> . . .	a 5
<i>Halleri</i> . . .	a 5
<i>Hænkeanum</i> . . .	a 5
<i>lanceolatum</i> . . .	a 5
<i>obovatum</i> . . .	a 5
<i>tenuifrons</i> . . .	a 5
<i>Blechnum australe</i> . . .	a 4
<i>Atherstoni</i> (P) . . .	a 4, a 4
<i>auriculatum</i> . . .	a 4
<i>angustatum</i> . . .	a 4
<i>alpinum</i> . . .	a 4
<i>Brasiliense</i> . . .	a 4
var. <i>corcovadense</i> . . .	a 4
<i>cycadifolium</i> . . .	a 4
<i>crispum</i> . . .	a 3
<i>capense</i> . . .	a 4
<i>chilense</i> . . .	a 4
<i>cartilagineum</i> . . .	a 4, a 4
<i>cognatum</i> . . .	a 4
<i>distans</i> . . .	a 4
<i>fasciculatum</i> . . .	a 4
<i>Gilliesii</i> . . .	a 4
<i>gracile</i> . . .	a 4
<i>glandulosum</i> . . .	a 4



	PAGE.		PAGE.
<i>Blechnum hastatum</i> . . .	a 4	<i>Campyloneuron Phyllitidis</i>	a 1
<i>intermedium</i> . . .	a 4	<i>Caasebeera pedata</i> . . .	a 3
<i>imbricatum</i> . . .	a 4	<i>Ceratopteris thalictroides</i>	a 2
<i>L'Herminieri</i> . . .	a 4	<i>Ceterach Magellanica</i> . . .	a 4
<i>longifolium</i> . . .	a 4	<i>Cheilanthes argentea</i> . . .	a 4
<i>meridionale</i> . . .	a 4	<i>arborescens</i> . . .	a 4
<i>Magellanicum</i> . . .	a 4	<i>brachypus</i> . . .	a 1
<i>occidentale</i> . . .	a 4	<i>chlorophylla</i> . . .	a 4
<i>orientale</i> . . .	a 4	<i>cuneata</i> . . .	a 4
<i>Patersoni</i> . . .	a 4	<i>dissecta</i> . . .	a 4
<i>polypodioides</i> . . .	a 4	<i>elegans</i> . . .	a 4
<i>pectinatum</i> . . .	a 4	<i>fragrans</i> . . .	a 4
<i>Pohlianum</i> . . .	a 4	<i>hastata</i> , var. <i>macrophylla</i>	a 4
<i>punctulatum</i> . . .	a 4	<i>intramarginalis</i> . . .	a 3
<i>rigidum</i> . . .	a 4	<i>macrophylla</i> . . .	a 3
<i>remotum</i> . . .	a 4	<i>multifida</i> . . .	a 4
<i>septentrionale</i> . . .	a 5	<i>Preissiana</i> . . .	a 4
<i>scabrum</i> . . .	a 4	<i>pellucida</i> . . .	a 4
<i>salicifolium</i> . . .	a 4	<i>Prionopteris</i> . . .	a 3
<i>serrulatum</i> . . .	a 4	<i>repens</i> . . .	a 4
<i>tricuspe</i> . . .	a 4	<i>Sieberi</i> . . .	a 4
<i>trifoliatum</i> . . .	a 4	<i>tenuifolia</i> . . .	a 4
<i>triangulare</i> . . .	a 4	<i>Chnoophora aculeata</i> . . .	181
<i>Blechnopsis agrostidifolium</i>	a 4	<i>Cibotium assamicum</i> . . .	99
<i>Cumingiana</i> . . .	a 4	<i>Barometz</i> . . .	103
<i>cartilagineum</i> . . .	a 4	<i>Billardieri</i> . . .	123
<i>elongata</i> . . .	a 4	<i>Chamissoi</i> . . .	99
<i>latifolia</i> . . .	a 4	<i>Cumingii</i> . . .	103
<i>orientalis</i> . . .	a 4	<i>glaucum</i> . . .	99, 103
<i>pyrophylla</i> . . .	a 4	<i>glaucescens</i> . <i>Kunze</i> , 99, 103	
<i>pyrophyllum</i> . . .	a 4	<i>glaucophyllum</i> . . .	103
<i>serrulata</i> . . .	a 4	<i>Menziesii</i> . . .	99
<i>stenophylla</i> . . .	a 4	<i>Schiedei</i> . <i>Chamisso</i> , 99, 101	
<i>Balantium antarcticum</i> . . .	123	<i>Cincinnatia argentea</i> . . .	a 1
<i>culcita</i> . . .	117	<i>nivea</i> . . .	a 1
<i>glaucescens</i> . . .	103	<i>tenera</i> . . .	a 1
<i>squarrosus</i> . . .	129	<i>Cionidium Moorii</i> . . .	107
<i>Belvisia septentrionalis</i> . . .	a 5	<i>Canopteris dissecta</i> . . .	a 5
<i>Brainea insignis</i> . . .	a 4	<i>Japonica</i> . . .	89
<i>Campyloneurum cæspitosum</i>	a 2	<i>Novæ Zealandia</i> . . .	a 5
<i>decurrens</i> . . .	a 2	<i>odontites</i> . . .	a 5
<i>lucidum</i> . . .	a 2	<i>Cnemidaria Kohautiana</i> . . .	165
<i>nitidum</i> . . .	a 2, a 2	<i>Colysis membranacea</i> . . .	a 2
<i>angustifolium</i> . . .	a 2	<i>Cormophyllum Capensis</i> . . .	175
<i>Campyloneuron angustifolium</i>		<i>Cryptogramme acrostichoides</i>	a 3
a 1, a 2			
<i>decurrens</i> . . .	a 1, a 2		

	PAGE.		PAGE.
Cryptogramme Brunoniana	a 3	Cyathea Mertensiana	159
crispa	a 3	monosorata	175
Culcita macrocarpa	117	Mexicana	153
Cyathea arborea	153, 154, 157	muricata	153
aspera	153, 159	Marattioides	154
aculeata	153, 154	polypodioides	154, 175
affinis	159	riparia	175
Borbonica	155	Rumphii	154
Brunonis	153	spinulosa	154
Beyrichiana	153	Sellowiana	154
Burkei	154	Sternbergii	154
canaliculata. Willdenow,	153,	serra	153, 154
154, 155		sinuata	153
var. latifolia	155, 156	Schanschin	153
commutata	169	Tussacii	154
Capensis	175	vestita	154
cuspidata	153	Walkerae	153
crenulata	154	Woodwardioides	154
celebica	154	Cylophorus lingua	a 1
dealbata. Swartz,	154, 161,	Cystopteris dimidiata	57
184		obovata	a 5
discolor	183	squamata	53
divergens	153	tenuis	a 7
Dregei	154	Danaea evecta	213
Delgadii	154	Darea coarctata	a 5
excelsa. Swartz,	153, 154,	foecunda	a 5
155, 157		odontites	a 5
extensa	159	Davallia attenuata	61
equestris	153	arborea	69, 70
ferox	181	aculeata. J. Smith	48, 79
grandifolia	165	angustata	48
Gardneri	153	alata	48
Grevilleana	154	adiantifolia	48
glauca	154	alpina	49
horrida	154, 165, 167	affinis	49
hirtula	154	Amboynensis	49
integra	154, 160	bidentata	71
Imrayana	153	bullata. Wallich	47, 49, 83
Javanica	154	bipinnatifida	48
latifolia	155, 156	Boryana	48
laevigata	154	Brasiliensis	48
Mascarena	155	Belangeri	48
melanocaula	155	bipinnata	48
medullaris. Swartz,	154, 159,	Blumeana	48
161		bifida	49
var. integra	160	biflora	49
var. tripinnata	160	Canariensis. Swartz	47, 48, 51

	PAGE.		PAGE.
<i>Davallia caudata</i> . . .	48, 81	<i>Davallia Jamaicensis</i> . . .	49
<i>chaerophylla</i> . <i>Wallich</i>	48, 53	<i>Kunzeana</i> . . .	48
<i>coniifolia</i> . . .	71	<i>Khasiyana</i> . <i>Hooker</i>	48, 91
<i>cordifolia</i> . . .	77	<i>lonchitidea</i> . <i>Wallich</i>	48, 87
<i>calvescens</i> . . .	48	<i>Lindleyi</i> . <i>Hooker</i>	47, 48, 61
<i>ciliata</i> . . .	48	<i>Luzonica</i> . . .	48
<i>concinna</i> . . .	48	<i>Lindeni</i> . . .	48
<i>chinensis</i> . . .	48	<i>lobulosa</i> . . .	65
<i>clavata</i> . . .	48	<i>majuscula</i> . <i>Lowce</i> . . .	93
<i>cordifolia</i> . . .	49	<i>membranulosa</i> . . .	48
<i>Cumingii</i> . . .	49	<i>Moluccana</i> . . .	48
<i>contigua</i> . . .	49	<i>Manilensis</i> . . .	48
<i>cuneiformis</i> . . .	49	<i>Mauritiana</i> . . .	48
<i>capillacea</i> . . .	49	<i>meifolia</i> . . .	49
<i>cuneifolia</i> . . .	49	<i>Magellanica</i> . . .	49
<i>dissecta</i> . <i>J. Smith</i>	47, 67	<i>Magelhaens</i> . . .	49
<i>divaricata</i> . . .	47, 48, 73	<i>mucronata</i> . . .	49
<i>dumosa</i> . . .	79	<i>Novæ Zelandiæ</i> . <i>Colenso</i>	48, 59
<i>divergens</i> . . .	89	<i>Nepalensis</i> . . .	89
<i>decurrens</i> . . .	48	<i>nodosa</i> . . .	48
<i>distans</i> . . .	49	<i>nitidula</i> . . .	48
<i>elegans</i> . <i>Swartz</i>	47, 48, 71, 81	<i>ornata</i> . <i>Wallich</i>	47, 75
<i>Emersoni</i> . . .	49	<i>pulchra</i> . . .	48, 53
<i>elata</i> . . .	49	<i>pentaphylla</i> . <i>Blume</i>	47, 49, 63
<i>ferruginea</i> . . .	55	<i>pinnatifida</i> . . .	65
<i>flaccida</i> . . .	89	<i>pyxidata</i> . <i>R. Brown</i>	47, 48, 69
<i>falcinella</i> . . .	48	<i>polyantha</i> . <i>Hooker</i>	48, 73
<i>fumarioides</i> . . .	48	<i>polypodioides</i> . <i>Don</i>	49, 89, 94
<i>Feejeensis</i> . . .	49	<i>var. hispida</i> . . .	90
<i>flexuosa</i> . . .	49	<i>var. pubescens</i> . . .	90
<i>gibberosa</i> . . .	48	<i>var. rhomboidea</i> . . .	90
<i>Goudotiana</i> . . .	49	<i>var. subglabra</i> . . .	90
<i>gracilis</i> . . .	48	<i>var.</i> . . .	92
<i>glauca</i> . . .	49	<i>pubescens</i> . . .	90
<i>Griffithiana</i> . . .	49	<i>pedata</i> . <i>Swartz</i> . . .	48, 77
<i>hispida</i> . . .	59, 90	<i>procera</i> . . .	81
<i>heterophylla</i> . <i>Smith</i>	48, 65	<i>platyphylla</i> . . .	87
<i>humilis</i> . . .	48	<i>parallela</i> . . .	48
<i>hemiptera</i> . . .	48	<i>pectinata</i> . . .	48
<i>hirsuta</i> . . .	48	<i>patens</i> . . .	48
<i>Hookeriana</i> . . .	48	<i>pinnata</i> . . .	48
<i>hirta</i> . . .	48	<i>parvula</i> . . .	48
<i>immersa</i> . <i>Wallich</i>	48, 57	<i>pulchella</i> . . .	48
<i>intramarginalis</i> . . .	48	<i>Parkeri</i> . . .	48
<i>Imrayana</i> . . .	48	<i>pellucida</i> . . .	49
<i>inæqualis</i> . . .	49		

	PAGE.		PAGE.
<i>Davallia Preslii</i> . . . .	49	<i>Dicksonia conifolia</i> . . . .	114
<i>proxima</i> . . . .	49	<i>culcita. L'Heritier</i> 114, 117	
<i>pilosa</i> . . . .	49	<i>cicutaria. Swartz</i> 114, 119	
<i>retusa</i> . . . .	49	<i>concinna</i> . . . .	114
<i>remota</i> . . . .	55	<i>cornuta</i> . . . .	114
<i>rhomboidea</i> . . . .	89, 90	<i>cuneata</i> . . . .	114
<i>solida. Swartz</i> 47, 48, 69, 81		<i>distenta</i> . . . .	114
<i>var. latifolia</i> . . . .	75	<i>Domingensis</i> . . . .	115
<i>sordida</i> . . . .	81	<i>dissecta</i> . . . .	114, 119, 120
<i>subimbricata</i> . . . .	77	<i>deltoides</i> . . . .	114
<i>subglabra</i> . . . .	90	<i>dubia</i> . . . .	114, 122
<i>serrata</i> . . . .	48, 49	<i>Davallioides. R. Brown</i> 114, 121	
<i>splendens</i> . . . .	48	<i>erosa</i> . . . .	114
<i>Schimperi</i> . . . .	48	<i>flaccida</i> . . . .	89, 114
<i>sessilifolia</i> . . . .	48	<i>fibrosa</i> . . . .	114
<i>saccoloma</i> . . . .	48	<i>Hookeriana</i> . . . .	119
<i>Schlechtendalii</i> . . . .	49	<i>Japonica</i> . . . .	114
<i>tenuifolia. Swartz</i> . . . .	48, 55	<i>Javanica</i> . . . .	114
<i>trichosticha. Hooker</i> 48, 85		<i>Kaulfussiana</i> . . . .	114
<i>trichomanoides</i> . . . .	48	<i>lanata</i> . . . .	113, 114
<i>trifoliata</i> . . . .	49	<i>Lindenii</i> . . . .	114
<i>triphylla</i> . . . .	49	<i>lniearis</i> . . . .	114
<i>Thecigera</i> . . . .	49	<i>Moluccana. Blume</i> 114, 133	
<i>triloba</i> . . . .	49	<i>martiana</i> . . . .	114
<i>thaliroides</i> . . . .	49	<i>marginalis</i> . . . .	114
<i>trapeziformis</i> . . . .	49	<i>Madagascariensis</i> . . . .	114
<i>Vogelii</i> . . . .	48	<i>multifida</i> . . . .	115
<i>urophylla</i> . . . .	49	<i>millefolium</i> . . . .	115
<i>vestita</i> . . . .	49	<i>obtusifolia</i> . . . .	115
<i>villosa</i> . . . .	49	<i>ordinata</i> . . . .	114
<i>Dennstadii adiantoides</i> . . . .	119	<i>polypodioides</i> . . . .	89
<i>Davallioides</i> . . . .	121	<i>puberula</i> . . . .	89
<i>punctilobula</i> . . . .	123	<i>pyramidata</i> . . . .	89
<i>Deparia Macraei</i> . . . .	111	<i>pilosula</i> . . . .	89
<i>Mathewsii</i> . . . .	109	<i>prolifera</i> . . . .	111
<i>Moorii</i> . . . .	107	<i>punctiloba. Hooker</i> 114, 123	
<i>prolifera. Hooker &amp; Greville</i>	109, 111	<i>pubescens</i> . . . .	123
<i>Dicksonia adiantoides</i> . . . .	114, 119	<i>pilosiuscula</i> . . . .	123
<i>antarctica. Labillardiere</i>	113, 114, 115, 125	<i>punctilobula</i> . . . .	123
<i>arborescens</i> . . . .	113, 114	<i>Plumieri</i> . . . .	114
<i>abrupta</i> . . . .	114	<i>pavoni</i> . . . .	114
<i>apiifolia</i> . . . .	114	<i>rubiginosa. Kaulfuss</i> 114, 131	
<i>anthrisciifolia</i> . . . .	114	<i>rhomboidea</i> . . . .	89
<i>appendiculata</i> . . . .	114	<i>Roxburghii</i> . . . .	89
<i>Berteroana</i> . . . .	114	<i>squarrosa. Swartz</i> 113, 114, 129	
		<i>Sellowiana</i> . . . .	114
		<i>straminea</i> . . . .	114

	PAGE.		PAGE.
Dicksonia sorbifolia . . .	114	Gleichenia farinosa . . .	136
strigosa . . .	114, 115	ferruginea . . .	136
scandens . . .	114	fulva . . .	136
scabra . . .	114	glaucescens . . .	136
Smithii . . .	114	glauca . . .	135
tenera . . .	119, 120	gigantea . . .	135
virens . . .	89	heciostophylla. <i>Cunningham</i>	
Zeylanica . . .	114	135, 136, 139, 147, 148	
Dictyoxiphium Panamense.		Hermannii . . .	145
<i>Hooker</i> 191, 193		hirta . . .	136
Didymoglossum alatum . . .	42	Klotzschii . . .	136
Diplazium cyathesfolium . . .	a 5	lanigera . . .	145
radicans . . .	a 5	longissima . . .	135
Doodia aspera . . .	a 4	longipinnata . . .	136
caudata . . .	a 4	lævigata . . .	136
blechnoides . . .	a 4	microphylla. <i>Brown</i>	
Kunthiana . . .	a 4	135, 136, 137, 139, 151	
media . . .	a 4	Mathewsii . . .	136
Doryopteris pedata . . .	a 3	nitida . . .	136
Drynaria diversifolia . . .	a 1	nervosa . . .	136
<i>Fortunei</i> . . .	a 1	Owhyhensis . . .	136
morbillosa . . .	a 2	polypodioides . . .	135
pinnata . . .	a 1	pedalis . . .	135
Willdenovii . . .	a 2	pubescens . . .	136
Filix aquatica . . .	7	rupestris. <i>Brown</i> 135, 136, 149	
florescens . . .	7	rigida . . .	145, 146
humilis repens . . .	42	revoluta . . .	136
latifolia . . .	7	rufinervis . . .	136
palustris . . .	7	remota . . .	136
Gleichenia alpina . . .	135	Speluncæ. <i>Brown</i> 135, 136,	
acutifolia . . .	135	137, 141	
bifurcata . . .	136	semivestita. <i>Labillardiere</i>	
Bancroftii . . .	135	135, 136, 137, 147, 151	
circinalis . . .	137	simplex . . .	136
circinata . . .	137	tenuis . . .	136
Cunninghami . . .	135	tomentosa . . .	136
cryptocarpa . . .	135	truncata . . .	136
Cumingiana . . .	136	tenera . . .	135
dicarpa. <i>Brown</i> 135, 136,		Vulcanica . . .	135
139, 147		vestita . . .	136
dichotoma. <i>Willdenow</i> 136,		Goniophlebium cuspidatum a 1	
145, 146		distan . . .	a 1
excelsa . . .	135	Catherinæ . . .	a 2
elata . . .	136	loriceum . . .	a 2
flabellata. <i>Brown</i> 135, 136,		Owariense . . .	a 2
143, 144		pleopeltis . . .	a 1
flagellaris . . .	136	subauriculatum . . .	a 1

	PAGE.		PAGE.
<i>Goniopteris fraxinifolia</i>	a 2	<i>Hymenophyllum asplenioides</i>	13
<i>lucida</i>	a 2	<i>abruptum</i>	13
<i>scolopendroides</i>	a 2	<i>Æruginosum</i>	13
<i>tetragona</i>	a 1	<i>arbuscula</i>	13
<i>vivipara</i>	a 1	<i>attenuatum</i>	14
<i>Grammitis totta</i>	a 1	<i>Australe</i>	14
<i>Gymnotheca laxa</i>	219	<i>axillare</i>	14
<i>Gymnogramme Brunoniana</i>	a 3	<i>Badium</i>	14, 23
<i>chrysophylla</i>	a 1	<i>Boryanum</i>	13
<i>calomelanos</i>	a 1	<i>Beyrichianum</i>	13
<i>chærophylla</i>	a 1	<i>Berteroi</i>	13
<i>L'Hermieri</i>	a 1	<i>Bridgesii</i>	14
<i>leptophylla</i>	a 1	<i>bivalve</i>	14
<i>Martensii</i>	a 1	<i>cruentum. Cavanilles</i>	13, 15
<i>ochracea</i>	a 1	<i>cupressiforme</i>	17
<i>rufa</i>	a 1	<i>clavatum</i>	23
<i>sulphurea</i>	a 1	<i>ciliatum</i>	13
<i>tartarea</i>	a 1	<i>Chilense</i>	13
<i>tomentosa</i>	a 1	<i>capillare</i>	13
<i>Hemionitis cordifolia</i>	a 7	<i>cristatum</i>	14
<i>palmata</i>	a 7	<i>caudiculatum</i>	14
<i>Hemitelia alternans</i>	163	<i>crispatum</i>	14
<i>Brasiliensis</i>	175	<i>crispum</i>	14
<i>Capensis</i>	175	<i>capillaceum</i>	14
<i>cordata</i>	163	<i>demissum. Swartz</i>	14, 22
<i>cruciata</i>	163	<i>dentatum</i>	14
<i>Cyathoides</i>	163	<i>dichotomum</i>	14
<i>Gardneriana</i>	175	<i>denticulatum</i>	14
<i>grandifolia. Sprengel</i>	163, 165	<i>dilatatum</i>	14
<i>Guianensis</i>	163	<i>Dædaleum</i>	14
<i>Hostmanni. Hooker</i>	154, 163, 169	<i>decurrens</i>	14
<i>horrida. Brown</i>	154, 163, 167	<i>emarginatum</i>	14
<i>Imrayana</i>	163	<i>Endiviæfolium</i>	14
<i>laciniata</i>	163	<i>exsertum</i>	14
<i>munita</i>	163	<i>erosum</i>	14
<i>multiflora</i>	163	<i>elegans</i>	13
<i>monilifera</i>	163	<i>elasticum</i>	13
<i>obtusa</i>	163	<i>fucoides</i>	14
<i>Parkeri</i>	163	<i>fimbriatum</i>	14
<i>petiolata</i>	163	<i>fucifome</i>	14
<i>riparia</i>	175	<i>flexuosum</i>	14
<i>Surinamensis</i>	169	<i>flabellatum</i>	14
<i>speciosa</i>	163	<i>floribundum</i>	14
<i>serrata</i>	163	<i>gracile</i>	14
<i>stigmosa</i>	163	<i>hirtellum. Swartz</i>	13, 21
<i>Humata chærophylla</i>	53	<i>hirsutum</i>	13
<i>elegans</i>	71	<i>Hygrometricum</i>	14
<i>heterophylla</i>	65	<i>imbricatum</i>	14
<i>immersa</i>	57	<i>interruptum</i>	14
<i>ophioglossa</i>	65	<i>Jalapense</i>	23
<i>pedata</i>	77	<i>Jamesoni</i>	14
<i>pinnatifida</i>	65	<i>Javanicum</i>	14
<i>pyxidata</i>	69	<i>lanceolatum</i>	13
<i>Hymenolepis spicata</i>	a 2	<i>Lindenii</i>	13
<i>Hymenophyllum asperulum</i>	17	<i>minimum</i>	17
<i>abietinum</i>	23	<i>Menziesii</i>	19
<i>alatum</i>	42	<i>Meyeri</i>	19
		<i>marginatum</i>	13

	PAGE.		PAGE.
<i>Hymenophyllum microcarpum</i>	13	<i>Lastrea æmulum</i>	a 7
<i>multifidum</i>	14	<i>quinquangularis</i>	a 6
<i>myriocarpum</i>	14	<i>tenericaulis</i>	a 2
<i>nudum</i>	14	<i>Lepicystis incana</i>	a 1
<i>Neesii</i>	14	<i>sepulta</i>	a 1
<i>obtusum</i>	13	<i>Leptogramme totta</i>	a 1
<i>Organense</i>	13	<i>villosa</i>	a 1
<i>peltatum</i>	19	<i>Leptopteris hymenophylloides</i>	189
<i>polyanthos.</i> <i>Swartz</i>	14, 23	<i>Leucostegia chærophylla</i>	53
<i>plumosum</i>	25	<i>immersa</i>	57
<i>Plumieri</i>	13	<i>ligulata</i>	53
<i>pulchellum</i>	13	<i>pulchra</i>	53
<i>pulcherrimum</i>	14	<i>Litobrochia collina</i>	a 3
<i>pyramidatum</i>	13	<i>pedata</i>	a 3
<i>Peruvianum</i>	14	<i>palmata</i>	a 3
<i>pectinatum</i>	14	<i>sagittæfolia</i>	a 3
<i>protrusum</i>	14	<i>Lomaria arborescens</i>	a 4
<i>revolutum</i>	17	<i>auriculata</i>	a 4
<i>ramosum</i>	20	<i>alpina</i>	a 4
<i>rupestre</i>	42	<i>Australis</i>	a 4
<i>ricciæfolium</i>	14, 23	<i>Boryana</i>	a 4
<i>recurvum</i>	14	<i>blechnoides</i>	a 4
<i>reniforme</i>	14	<i>Brasiliensis</i>	a 4
<i>ramosissimum</i>	14	<i>Capensis</i>	a 4, a 4, a 4
<i>rarum</i>	14	<i>Chilensis</i>	a 4, a 4
<i>sanguinolentum</i>	23	<i>campylotis</i>	a 4
<i>sericeum.</i> <i>Swartz</i>	13, 25	<i>coriacea</i>	a 4
<i>Smithii</i>	14	<i>cycadifolia</i>	a 4
<i>secundum</i>	14	<i>cinnamomea</i>	a 4
<i>spinulosum</i>	14	<i>danæacea</i>	a 4
<i>scabrum</i>	14	<i>discolor</i>	a 4
<i>tomentosum</i>	25	<i>densa</i>	a 4
<i>Tunbridgenso.</i> <i>J. E. Smith</i>	14, 17, 19, 20	<i>ensiformis</i>	a 4
<i>var.</i>	42	<i>falciformis</i>	a 4
<i>trichophyllum</i>	13	<i>Gayana</i>	a 4
<i>tortuosum</i>	14	<i>Gilliesii</i>	a 4, a 4
<i>Thunbergii</i>	17	<i>hastata</i>	a 4
<i>tenellum</i>	14	<i>imbricata</i>	a 4
<i>Telfairianum</i>	14	<i>latifolia</i>	a 4
<i>unilaterale.</i> <i>Willdenow</i>	19	<i>lineata</i>	a 4, a 4
<i>var. ramosum</i>	20	<i>linearis</i>	a 4
<i>villosum</i>	23	<i>lanuginosa</i>	a 4
<i>valvatum</i>	13	<i>L'Herminieri</i>	a 4
<i>undulatum</i>	14	<i>longifolia</i>	a 4
<i>Wilseni</i>	14, 19	<i>lanceolata</i>	a 4, a 4
<i>Hypolepis Dicksonioides</i>	a 4	<i>Magellanica</i>	a 4
<i>repens</i>	a 4	<i>microphylla</i>	a 4
<i>tenuifolia</i>	a 4	<i>ornifolia</i>	a 4
<i>Hydroglossum flexuosum</i>	207	<i>obtusata</i>	a 4
<i>palmatum</i>	209	<i>Pateroni</i>	a 4
<i>Lastrea aristata</i>	a 6	<i>punctulata</i>	a 4, a 4
<i>crinita</i>	a 7	<i>procera</i>	a 4, a 4
<i>Canariensis</i>	a 6	<i>pubescens</i>	a 4
<i>frondosa</i>	a 6	<i>polypodioides</i>	a 4
<i>hispidula</i>	a 7	<i>Pœppigianum</i>	a 4
<i>Kaulfussii</i>	a 7	<i>pumila</i>	a 4
<i>noveboracensis</i>	a 6	<i>Ryani</i>	a 4
		<i>rufa</i>	a 4

	PAGE.		PAGE.
<i>Lomaria spectabilis</i>	a 4, a 4	<i>Myriopteris tomentosa</i>	a 1
<i>striata</i>	, a 4, a 4	<i>vestita</i>	a 1
<i>spicant</i>	, , a 4	<i>Nephrodium Barometz</i>	103
<i>Sellowiana</i>	, , a 4	<i>glandulosum</i>	a 7
<i>Schottii</i>	, , a 4	<i>Hookeri</i>	a 6
<i>Schiediana</i>	, , a 4	<i>molle</i>	a 6
<i>stenophylla</i>	, , a 4	<i>oligodontum</i>	a 5
<i>trichomanoides</i>	, a 4	<i>punctilobum</i>	123
<i>vestita</i>	, , a 4	<i>terminans</i>	a 6
<i>Lonchitis Ascensionis</i>	. . . a 3	<i>unitum</i>	a 6
<i>repens</i>	. . . a 4	<i>Nephrolepis platyotis</i>	a 7
<i>tenuifolium</i>	. . . a 4	<i>tuberosa</i>	a 7
<i>Lophosoria affinis</i>	. . . 183	<i>Niphobolus adnascens</i>	a 1
<i>discolor</i>	. . . 183	<i>sinensis</i>	a 1
<i>polypodioides</i>	. . . 183	<i>Nothochlæna lævis</i>	a 1
<i>pruinata</i>	. . . 183	<i>Notholæna Eckloniana</i>	a 1
<i>Lygodium articulatum</i>	. . . 203	<i>lanuginosa</i>	a 1
<i>dichotomum</i>	. . . 207	<i>lævis</i>	a 1
<i>flexuosum</i>	<i>Swartz</i> 203, 207	<i>Marantæ</i>	a 1
<i>Japonicum</i>	<i>Swartz</i> 203, 205	<i>nivea</i>	a 1
<i>palmatum</i>	<i>Swartz</i> 203, 209	<i>trichomanoides</i>	a 1
<i>scandens</i>	. . . 203, 205	<i>Odontosoria aculeata</i>	79
<i>Marattia alata</i>	. . . 217	<i>tenuifolia</i>	55
<i>Ascensionis</i>	. . . 217	<i>Oleandra neriiformis</i>	a 7
<i>cicutæfolia</i>	. . . 217	<i>procera</i>	a 4
<i>elegans</i>	. . . 217	<i>Ophioglossum flexuosum</i>	207
<i>laxa</i>	<i>Kunze</i> . . . 219	<i>Onychium Capense</i>	a 3
<i>Marginaria angustifolia</i>	. . . a 1	<i>Japonicum</i>	a 3
<i>Menisium palustre</i>	. . . a 2	<i>Krebsii</i>	a 3
<i>Mertensia dichotoma</i>	. . . 145	<i>lucidum</i>	a 3
<i>discolor</i>	. . . 145	<i>Osmunda Brasiliensis</i>	201
<i>flabellata</i>	. . . 143	<i>cinnamomea</i>	<i>Linnaeus</i> 2, 3
<i>flexuosa</i>	. . . 145	<i>Claytoniana</i>	<i>Linnaeus</i> 2, 5, 6
<i>Hookeri</i>	. . . 145	<i>filix-florida</i>	a 7
<i>mucronata</i>	. . . 145, 146	<i>gracilis</i>	<i>Link</i> . . . 2, 9, 10
<i>pusilla</i>	. . . 145	<i>glaucescens</i>	. . . 2
<i>Sieberi</i>	. . . 145	<i>humilis</i>	. . . 9
<i>Mesochlæna Javanica</i>	. . . a 7	<i>imbricata</i>	. . . 2
<i>Mesothema Australe</i>	. . . a 4	<i>interrupta</i>	. . . 2, 5, 6
<i>remota</i>	. . . a 4	<i>Japonica</i>	. . . 2
<i>Microlepia cristata</i>	. . . 91	<i>Javanica</i>	. . . 2
<i>flaccida</i>	. . . 89	<i>lancea</i>	. . . 2
<i>Khasiyana</i>	. . . 91	<i>obtusifolia</i>	. . . 2
<i>Khasiyana</i>	. . . 91	<i>phyllitidis</i>	. . . 201
<i>lonchitidea</i>	. . . 87	<i>palustris</i>	. . . 2, 9
<i>majuscula</i>	. . . 93	<i>regalis</i>	<i>Linnaeus</i> 2, 7, 8, 9, 10
<i>Novæ-Zelandiæ</i>	. . . 59	<i>spectabilis</i>	. . . 2
<i>polyantha</i>	. . . 73	<i>thurifraga</i>	. . . 197
<i>platyphylla</i>	. . . 87	<i>Panicularia Berteri</i>	. . . 97
<i>polypodioides</i>	. . . 89	<i>Patania crosa</i>	. . . 119, 120
<i>rhomboidea</i>	. . . 89, 90	<i>Pellæa calomelanos</i>	a 3
<i>trichosticha</i>	. . . 85	<i>flexuosa</i>	a 3
<i>Microsorium irioides</i>	. . . a 1	<i>hastata</i>	var. <i>macrophylla</i>
<i>irregulare</i>	. . . a 1	<i>macrophylla</i>	. . . a 3
<i>sessile</i>	. . . a 1	<i>rotundifolia</i>	. . . a 3
<i>Mohria achilleæfolium</i>	. . . 198	<i>ternifolia</i>	. . . a 3
<i>thurifraga</i>	<i>Swartz</i> 195, 197		
var. <i>achilleæfolium</i>	. . . 198		



